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THE MICHIGAN STATE ECONOMIC RECORD

(ISSN: 0026-2455)

A MONTHLY REPORT ON BUSINESS CONDITIONS IN MICHIGAN

Volume 22 No. 2

FEBRUARY 1980

Published by the Bureau of Business and Economic Research, University School of Business Administration, Michigan State University, East Lansing, Michigan 48824

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Michigan State University

EAST LANSING MICHIGAN 48824

TRAVEL UPDATE

by DAVID I. VERWAY, *Research Professor, Graduate School of Business Administration, Michigan State University.*

During 1977, 53 million American households traveled; that is, at least one member in each one of them visited a place 100 or more miles from home and returned. California was affected more than any other state. Nearly 22 million people (from more than 10 million households) traveled through or to, or originated their trips in, the Golden State. Second through sixth places were held by New York, Florida, Pennsylvania, Illinois, and Ohio. Michigan ranked seventeenth. This comparatively low ranking results from the fact that relatively few people pass through Michigan on their way elsewhere. Illinois, in contrast, is the crossroads of the nation. Maryland, Pennsylvania, New York, Ohio, New Jersey, and Indiana also have heavy through traffic. Excluding those who are just passing through, Michigan ranked seventh in the number of visitors. California led, followed by Florida, Texas, New Yorl., Pennsylvania, and Illinois.

Person-trips and Person-nights

The National Travel Survey is conducted as part of the quinquennial Census of Transportation during years ending in 2 and 7. Between April 1977 and January 1978, 20,000 U.S. households provided information about their travel during the year. Besides data on education, income, age, and various other characteristics of the households and the people in them, the Bureau of the Census collected information about trip destinations, mode of travel, distance, and so forth. The results were used to develop estimates of travel patterns for all U.S. households.

A traveler is one who journeys 100 or more miles from home and returns. A person-trip is each such event. If the same person makes two of these trips, that equals two person-trips in the data. Two persons traveling together on a trip also equals two person-trips. Excluded from this definition are trips by crew members of trains, buses, trucks, planes, and ships; trips by students between home and school; trips by military personnel traveling on duty; and commuting to and from work. The 100-mile criterion is based on the fact that few people can recall every journey of less than 100 miles, but most remember those that are longer. The definition makes for consistency of response among households, although it produces some strange results. For example, no intrastate trips are possible in Rhode Island because of its size.

In person-trips, by state of destination (that is, excluding those just passing through), Michigan ranked sixth behind California, Texas, Florida, New York, and Pennsylvania, in that order. In person-nights, by state of destination, the Wolverine State was fifth, after Florida, California, Texas, and New York. A person-night equals one person away from home on a trip for one night. For example, three persons on a trip that entails being away for two nights equals six person-nights.

Since destination rather than origin was the focus of the survey, figures on geographic origin of travel are sketchy. Those available reveal that Michigan supplies more travelers to the nation than it hosts. The same is true of most midwestern states, Wisconsin being a notable exception. The South is the leading region in attracting more visitors than it sends, and the West and New England ran a similar "surplus" in terms of

person-nights. The region encompassing New York, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, Virginia, and Washington, D.C., ran a deficit, even though the nation's capital, Delaware, and West Virginia had surpluses.

In most states, the largest category of travel was that involving visits to friends and relatives. Exceptions were Alaska, Delaware, New Hampshire, and Vermont (outdoor recreation was the leading travel motivation), Washington, D.C. (business travel led), Hawaii (sightseeing was the major category), and Nevada (entertainment was the pri-

(Continued on page 6)

TABLE 1
Selected Trip Characteristics of Michigan and U.S. Travel: 1972 and 1977

Item		Travel in Michigan: To and through the state: Person-trips: Number (000)	Person-trips: Percentage of total	Person-nights: Number (000)	Person-nights: Percentage of total	Michigan destination: Person-trips: Number (000)	Person-trips: Percentage of total	Person-nights: Number (000)	Person-nights: Percentage of total	Total U.S. travel: Person-trips: Number (000)	Person-trips: Percentage of total	Person-nights: Number (000)	Person-nights: Percentage of total
Major means of transportation													
Auto/truck (without camping equipment)	1972	18,388	86	51,080	77	17,592	87	49,267	79	356,256	78	1,089,995	61
	1977	24,576	82	52,045	71	16,007	81	50,005	71	411,023	76	1,297,086	60
Auto/truck (with camping equipment)	1972	1,571	7	6,979	11	1,518	7	6,246	10	34,418	8	176,995	10
	1977	2,353	8	5,813	8	1,225	6	5,319	8	30,983	6	179,633	8
Bus	1972	269	1	1,420	2	248	1	1,365	2	8,413	2	46,993	3
	1977	345	1	988	1	325	2	955	1	14,959	3	54,428	3
Train	1972	24	0	85	0	18	0	79	0	1,880	0	10,803	1
	1977	130	0	774	1	106	1	722	1	4,094	1	21,198	1
Air	1972	1,014	5	5,739	9	927	5	5,065	8	53,891	12	417,830	23
	1977	1,717	6	9,013	12	1,465	7	8,285	12	65,662	12	502,187	23
Other	1972	104	0	677	1	92	0	628	1	3,626	1	39,284	2
	1977	1,021	3	5,036	7	871	3	4,814	7	12,568	2	109,830	5
Main purpose of trip													
Visit friends and relatives	1972	7,363	34	23,575	36	7,079	35	22,151	35	175,868	38	726,011	41
	1977	10,777	36	30,694	42	6,767	34	29,334	42	198,479	37	900,382	42
Business and conventions	1972	3,107	15	6,357	10	2,893	14	6,027	10	92,571	20	287,760	16
	1977	3,742	12	6,723	9	2,858	14	6,139	9	105,404	20	308,382	14
Outdoor recreation	1972	4,551	21	17,776	27	4,339	21	17,233	28	57,090	12	219,907	12
	1977	6,048	20	15,891	22	4,926	25	15,376	22	70,610	13	284,099	13
Sightseeing and entertainment	1972	1,787	8	3,695	6	1,385	7	2,830	5	60,774	13	266,072	15
	1977	3,584	12	6,577	9	1,564	8	5,733	8	70,027	13	300,632	14
Other	1972	4,563	21	14,578	22	4,499	22	14,410	23	72,179	16	282,150	16
	1977	5,902	20	13,785	19	3,684	19	13,519	19	94,769	18	370,868	17
Weekend or other trip													
Weekend trip	1972	10,780	50	23,645	36	10,412	52	22,749	36	218,746	48	489,544	27
	1977	13,245	44	19,025	26	9,113	46	18,685	27	218,465	41	438,252	20
Not a weekend trip	1972	9,125	43	36,343	55	8,462	42	34,155	55	214,038	47	1,145,765	64
	1977	16,279	54	54,038	73	10,289	52	50,808	72	314,691	58	1,714,252	79
Not reported	1972	1,467	7	5,992	9	1,321	7	5,747	9	25,699	6	146,592	8
	1977	528	2	607	1	397	2	607	8	6,134	1	11,859	1
Vacation or other trip													
Vacation	1972	8,566	40	40,927	62	7,699	38	38,284	61	176,891	39	1,098,926	62
	1977	12,655	42	46,341	63	7,652	39	43,532	62	199,631	37	1,348,996	62
Not a vacation	1972	11,873	56	22,189	34	11,585	57	21,707	35	268,609	59	637,390	36
	1977	16,881	56	26,540	36	11,742	59	25,779	37	335,692	62	800,077	37
Not reported	1972	932	4	2,863	4	911	5	2,649	4	12,984	3	45,584	3
	1977	515	2	788	1	406	2	788	1	3,967	1	15,289	1
Round-trip distance													
200 to 399 miles	1972	10,159	48	18,625	28	10,150	50	18,604	30	189,018	41	301,209	17
	1977	13,911	46	28,040	38	10,904	55	27,881	40	272,299	50	509,820	23
400 to 599 miles	1972	5,126	24	16,239	25	5,069	25	16,150	26	91,663	20	227,858	13
	1977	6,580	22	14,880	20	4,797	24	14,490	21	94,004	17	268,454	12
600 to 799 miles	1972	2,191	10	8,592	13	2,143	11	8,508	14	45,454	10	148,573	8
	1977	1,913	6	5,823	8	1,280	6	5,668	8	40,634	8	168,034	8
800 to 999 miles	1972	912	4	4,586	7	891	4	4,539	7	25,345	6	103,055	6
	1977	1,090	4	4,096	6	673	3	3,940	6	24,120	4	119,101	6

TABLE 1 (Cont.)

Selected Trip Characteristics of Michigan and U.S. Travel: 1972 and 1977 (Cont.)

Item		Travel in Michigan: To and through the state: Person-trips: Number (000)	Person-trips: Percentage of total	Person-nights: Number (000)	Person-nights: Percentage of total	Michigan destination: Person-trips: Number (000)	Person-trips: Percentage of total	Person-nights: Number (000)	Person-nights: Percentage of total	Total U.S. travel: Person-trips: Number (000)	Person-trips: Percentage of total	Person-nights: Number (000)	Person-nights: Percentage of total
1,000 to 1,999 miles	1972	1,681	8	9,950	15	1,522	8	9,564	15	47,864	10	291,878	16
	1977	2,890	10	8,541	12	1,300	7	7,773	11	47,634	9	353,138	16
2,000 miles and over	1972	938	4	6,828	10	419	2	5,285	8	40,703	9	497,668	28
	1977	2,412	8	11,377	15	845	2	10,347	15	42,728	8	567,373	26
Outside United States	1972	363	2	1,159	2	X	X	X	X	18,436	4	211,659	12
	1977	1,257	4	913	1	X	X	X	X	17,862	3	188,442	9
Duration of trip													
No nights out of town	1972	3,945	18	X	X	3,945	20	X	X	82,699	18	X	X
	1977	4,031	13	X	X	3,064	15	X	X	100,844	19	X	X
1 to 2 nights	1972	9,390	44	15,543	24	9,096	45	15,064	24	194,916	43	308,030	17
	1977	12,398	41	14,215	19	8,750	44	14,120	20	220,311	41	351,548	16
3 to 5 nights	1972	4,493	21	15,265	23	4,236	21	14,747	24	100,837	22	372,359	21
	1977	6,880	23	16,354	22	4,485	23	15,666	22	119,473	22	437,034	20
6 to 15 nights	1972	2,938	14	22,228	34	2,518	12	21,315	34	64,418	14	585,271	33
	1977	5,274	18	25,690	35	2,950	15	24,199	35	78,465	15	705,775	33
16 nights or more	1972	605	3	12,942	20	400	2	11,523	18	15,613	3	516,240	29
	1977	1,469	5	17,410	24	551	3	16,115	23	20,232	4	670,005	31
Number on trip													
1 person	1972	4,295	20	15,368	23	4,098	20	14,413	23	120,020	26	490,629	28
	1977	8,839	29	22,677	31	6,496	33	21,674	31	186,400	35	728,631	34
2 persons	1972	5,862	27	17,080	26	5,581	28	16,350	26	130,574	28	551,417	31
	1977	9,382	31	22,801	31	5,883	30	21,840	31	164,400	30	727,031	34
3 persons or more	1972	11,216	52	33,530	51	10,517	52	31,886	51	207,890	45	739,853	42
	1977	11,832	39	28,191	38	7,420	37	26,586	38	118,489	35	708,701	32
Area of destination													
In an SMSA	1972	7,420	35	18,043	27	7,161	35	17,450	28	239,820	52	879,982	49
Not in an SMSA	1972	13,589	64	46,777	71	13,035	65	45,201	72	200,258	44	691,065	39
Outside United States	1972	363	2	1,159	2	X	X	X	X	18,405	4	210,852	12
Travel region of origin													
New England	1972	123	1	313	0	87	0	267	0	25,545	6	97,742	5
	1977	157	1	774	1	108	1	725	1	23,472	4	103,218	5
New York–New Jersey	1972	386	2	1,708	3	325	2	1,584	3	37,647	8	203,965	11
	1977	403	1	1,344	2	249	1	1,196	2	44,363	8	219,723	10
Mid-Atlantic	1972	484	2	2,070	3	417	2	1,930	3	45,674	10	180,683	10
	1977	361	1	2,649	4	338	2	2,629	4	53,263	10	209,422	10
South	1972	486	2	3,754	6	411	2	3,424	5	74,568	16	277,215	16
	1977	1,016	3	8,825	12	919	5	8,529	12	96,608	18	375,453	17
North Central	1972	19,442	91	53,191	81	18,601	92	51,272	82	113,234	25	446,028	25
	1977	27,290	91	53,351	72	17,599	89	51,111	73	127,679	24	506,299	23
Trip originated in Michigan	1977	20,165	67	34,613	47	11,645	59	33,085	47	n.a.	n.a.	n.a.	n.a.
Northwest	1972	91	0	643	1	67	0	529	1	21,508	5	75,971	4
	1977	227	1	1,678	2	173	1	1,515	2	28,854	5	97,538	5
Southwest	1972	206	1	2,267	3	182	1	2,179	3	67,703	15	220,881	12
	1977	285	1	1,551	2	241	1	1,457	2	79,905	15	295,475	14
Pacific	1972	153	1	2,035	3	105	1	1,466	2	72,604	16	279,415	16
	1977	314	1	3,317	5	171	1	2,938	4	85,146	16	357,235	17
Quarters													
First	1972	3,668	17	8,167	12	3,576	18	7,594	12	92,270	20	301,634	17
	1977	4,994	17	8,203	11	3,112	16	7,991	11	125,334	23	432,840	20
Second	1972	5,065	24	11,540	17	4,800	24	10,939	17	116,024	25	407,855	23
	1977	8,049	27	17,518	24	5,178	26	16,804	24	139,613	26	504,015	23
Third	1972	8,461	40	35,959	55	7,790	39	34,212	55	152,059	33	745,342	42
	1977	11,352	38	33,901	46	7,546	38	31,900	46	166,685	31	833,788	39
Fourth	1972	4,178	20	10,314	16	4,029	20	9,905	16	98,131	21	327,069	18
	1977	5,656	19	14,048	19	3,964	20	13,404	19	107,658	20	393,719	18
TOTAL	1972	21,371	100	65,979	100	20,195	100	62,650	100	458,483	100	1,781,900	100
	1977	30,052	100	73,669	100	19,800	100	70,100	100	539,290	100	2,164,362	100

SOURCE: U.S. Bureau of the Census, *1972 Census of Transportation, National Travel Survey, Travel during 1972* (Washington, D.C.: Superintendent of Documents, 1973), Tables 2 and 46; and U.S. Bureau of the Census, *1977 Census of Transportation, National Travel Survey, Travel during 1977* (Washington, D.C.: Superintendent of Documents, 1979), Tables 2A and 28.

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	43.6	41.0	39.2 (Nov.)
Average weekly hours, U.S.	40.9	40.3	40.2 (Nov.)
Average hourly earnings, Michigan ($)	8.52	8.91	8.87 (Nov.)
Average hourly earnings, U.S. ($)	6.38	6.82	6.85 (Nov.)
U.S. motor vehicle production (units)	1,127,609	607,205	733,456 (Jan.)
Michigan electricity usage (mil. kwh.)	6,080	5,823	5,701 (Oct.)
Industrial (mil. kwh.)	2,963	2,695	2,679 (Oct.)
Residential (mil. kwh.)	1,772	1,759	1,652 (Oct.)
Raw steel production:			
Michigan (000 net tons)	926	753	751 (Dec.)
United States (000 net tons)	11,812	9,997	9,996 (Dec.)
Consumer price index (1967 = 100)			
Detroit area	202.2	231.3	233.3 (Dec.)
United States	202.9	227.5	229.9 (Dec.)
U.S. wholesale price index (1967 = 100)	217.5	246.9	249.4 (Dec.)
Michigan farm prices received index (1967 = 100)	214	231	236 (Dec.)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics, Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, 1978 and 1979 Total

(Thousands of dollars)

Area	Nonresidential			Residential			Total[a]		
	1978	1979	Percentage change	1978	1979	Percentage change	1978	1979	Percentage change
Ann Arbor	59,942	75,052	+ 22	90,402	82,717	− 9	150,344	157,769	+ 5
Battle Creek	40,622	21,988	− 46	29,838	37,586	+ 26	70,460	59,574	− 15
Bay City	12,445	10,530	− 15	18,447	14,060	− 24	30,892	24,590	− 20
Detroit	902,153	1,013,597	+ 12	1,132,079	1,095,321	− 3	2,034,232	2,108,918	+ 4
Flint	76,447	82,857	+ 8	104,031	98,385	− 5	180,478	181,242	—
Grand Rapids	173,722	263,125	+ 51	206,104	170,191	− 17	372,826	433,316	+ 14
Jackson	14,138	19,386	+ 37	24,498	35,177	+ 44	38,636	54,563	+ 41
Kalamazoo-Portage	35,058	59,530	+ 70	80,430	70,378	− 12	115,488	129,908	+ 12
Lansing–East Lansing	92,096	98,691	+ 7	121,114	161,029	+ 33	213,210	259,720	+ 22
Muskegon–Norton Shores–Muskegon Heights	23,686	21,411	− 10	38,371	26,255	− 32	62,057	47,666	− 23
Saginaw	68,811	38,873	− 44	49,649	61,674	+ 24	118,460	100,547	− 15
Michigan	1,752,267	1,945,482	+ 11	2,469,130	2,399,418	− 3	4,221,397	4,344,900	+ 3
United States	45,045,834	49,659,492	+ 10	74,949,473	74,685,642	—	119,995,307	124,345,134	+ 4

SOURCE: F. W. Dodge Division of McGraw Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1978 and 1979 figures for nonbuilding construction contracts were $1,821,304,000 and $892,825,000 respectively, or a decrease of 51 percent. U. S. figures for nonbuilding construction contracts were $39,934,701,000 and $42,032,763,000 or an increase of 5 percent.

Quarterly Motor Vehicle Employment and Assembly

Item	1977			1978				1979			
	2	3	4	1	2	3	4	1	2	3	4
EMPLOYMENT[a]											
Checker											
Michigan	1,024	1,102	1,166	1,117	1,118	1,084	1,140	1,207	1,194	1,182	1,099
Chrysler											
Michigan	83,490	82,701	84,047	78,744	82,799	75,187	81,664	75,316	70,238	58,182	55,456
United States	135,089	135,039	137,286	131,066	136,158	125,989	135,997	125,899	118,532	99,754	98,228
Ford[b]											
Michigan	117,858	118,775	124,098	124,187	127,148	126,300	135,377	132,298	129,526	117,630	111,790
United States	223,031	222,119	233,911	234,635	239,517	233,314	253,536	245,253	240,054	211,763	196,038
General Motors											
Michigan	265,000	252,000	280,000	264,000	278,000	267,000	289,000	295,000	296,000	291,000	288,000
United States	586,000	564,000	624,000	588,000	619,000	594,000	643,000	644,000	650,000	582,000	602,000
ASSEMBLY											
Dearborn	28,695	39,828	37,107	40,230	70,007	39,072	83,017	96,572	92,774	85,970	68,819
Detroit	131,092	126,505	126,739	130,969	140,723	54,857[c]	89,563[c]	130,475[c]	113,866[c]	56,399[c]	78,055
Detroit (truck)	8,368	8,667	7,577	7,587	11,443	11,142	30,753[c]	33,693[c]	28,503[c]	12,861[c]	16,534
Flint	124,983	53,905	100,181	93,380	104,042	76,157	109,192	115,405	110,135	56,914	90,222
Flint (truck)	90,812	109,197	103,976	107,414	116,436	103,549	104,839	114,846	95,075	60,985	75,541
Hamtramck	100,421	94,246	72,429	56,098	86,545	56,808	54,230	44,901	62,806	15,345	30,134
Kalamazoo	952	1,314	1,095	1,361	1,036	809	1,019	1,134	1,268	1,203	1,161
Lansing	119,021	45,921	99,322	93,080	110,381	62,327	116,726	130,644	130,363	72,684	96,143
Pontiac	102,368	29,710	83,219	75,104	87,334	61,666	82,652	91,712	85,977	46,578	61,082
Pontiac (bus & truck)	31,661	38,253	40,474	55,041	67,569	61,741	72,398	77,144	73,922	51,628	42,135
Warren (bus & truck)	90,185	78,855	70,738	76,322	94,415	72,181	84,504	76,365	48,873	5,027	19,043
Wayne	76,680	59,823	67,939	76,242	76,599	63,214	55,607	50,477	46,765	34,081	28,800
Wayne (truck)	51,778	32,905	50,706	53,462	56,436	48,390	52,388	56,052	51,994	21,305	34,256
Wixom	52,483	43,875	43,677	42,915	47,639	36,508	46,902	51,132	36,527	20,013	32,604
Ypsilanti	70,270	69,327	62,270	60,220	73,733	57,178	38,891	38,797	75,420	73,508	70,507
Total Michigan											
Passenger car	606,795	564,544	693,978	669,599	798,039	508,596	654,346	751,250	755,901	462,695	557,527
Bus and truck	272,804	266,877	273,471	299,826	341,141	297,003	368,325	358,100	298,367	151,806	187,509
Total United States											
Passenger car	2,639,036	1,931,390	2,306,400	2,267,474	2,656,507	1,850,701	2,398,411	2,411,307	2,482,907	1,655,546	1,884,756
Bus and truck	910,930	849,649	850,989	865,427	1,019,266	851,996	982,232	1,024,655	916,996	529,092	564,118
Total Canada											
Passenger car	362,147	196,129	282,256	289,695	345,842	229,593	297,157	307,823	281,806	171,427	227,966
Bus and truck	162,803	113,923	171,998	171,127	185,031	120,199	180,355	200,162	190,698	107,988	135,532

SOURCE: Ward's *Automotive Reports*; Motor Vehicle Manufacturers Association of the United States, Inc., P-I report; and companies.

a. Average monthly wage and salary employment of companies with assembly plants in Michigan; includes nonautomotive.

b. Excludes Ford Aerospace and Communications Corporation and finance and insurance subsidiaries.

c. Chrysler's Jefferson Avenue plant has been converted to truck production. The plant had no production during July and August and began assembling trucks during the latter part of September.

n.a.: Not available at this writing.

Travel Update

(Continued from page 3)

mary motive). California led in all these categories. In the number of person-trips and person-nights with outdoor recreation as the main purpose, Wisconsin was second, Michigan third. Michigan also ranked among the top ten states in the categories of sightseeing (sixth), visiting friends and relatives (eighth), and business (ninth).

Accommodations figures were not compiled on a state-by-state basis, but the following observations were made with regard to regions:

> The most popular type of overnight accommodation was with relatives or friends, ranging from 43 percent of nights spent in New England to 61 percent in the Great Lakes Country. New England, the South, and the Far West regions were among the leaders in percentage of nights spent in rental accommodations (slightly over one-third). Nights spent in public or commercial campgrounds were high in the South and Far West regions. Nights spent in own cabin, campsite, or vacation home was highest in the Great Lakes Country and the South.[1]

Michigan travel is more car or truck oriented than the national pattern, and there is less emphasis on airplanes. Compared to the nation, Michigan journeys are more likely to be weekend trips and to involve shorter round-trip distances and more people. Summer is the most popular travel season, more so in Michigan than the nation as a whole (see Table 1).

Of the 19,800,000 person-trips with Michigan destinations made in 1977, 59 percent originated in-state. Michigan ranks eighth in the percentage of total person-trips that have both an in-state origin and destination. California ranked first. Michigan was sixth from the bottom in number of visitors relative to state population, attracting .89 outside travelers with a Michigan destination per resident. California ranked last on this score (see Table 2). However, Michigan and California were above the norm in the number of in-state travelers with an in-state destination per resident. These figures indicate that in these two states, as well as in Texas, Nebraska, Washington, Oregon, Idaho, and Minnesota, the state's amenities appeal more to those who live there than to outsiders. In contrast, Nevada can count relatively few residents in its travel market. The same appears to be the case in Washington, D.C., Vermont, New Hampshire, and Delaware, but it should be borne in mind that much driving in these small areas is performed to destinations less than 100 miles from home and therefore excluded from the travel definition.

Rounding out the highlights from the 1977 National Travel Survey are the facts that Michigan travelers are both more affluent and more likely to be factory workers than are other U.S. travelers.

A comparison of the 1972 and 1977 travel data reveals that Michigan was one of only a few states experiencing a decline in the number of person-trips by destination. In person-nights with a Michigan destination, there was an increase of 12 percent, compared with a 21 percent gain in the corresponding national statistic. The data also show that the frequency of visiting friends and relatives here longer, on the average. In 1977, more people came to enjoy the Michigan out-of-doors, but they stayed for shorter periods than in 1972.

The volume of business and convention travel to Michigan changed little between 1972 and 1977, although nationally there was a gain. But Michigan outpaced the nation in the rate of increase in travel motivated by sightseeing and entertainment. The state's share of the national total in the latter category still is modest, however, compared with our share of population and income.

Other Travel Indicators

As part of its economic census program, the Census Bureau also collects data from business establishments. Each is classified according to its major economic activity. A hotel, motel, tourist court, trailer park, or camp that derives most of its revenues from fees for providing lodgings to the general public is classified in the lodgings industry. During 1977, that industry had receipts of $18.5 billion. Among the states, California was the leader with $1.9 billion, Nevada was second, and Florida third. Michigan ranked eleventh, slipping from tenth place in 1972 (see Table 3). Per capita receipts in the Michigan lodgings industry amounted to less than $49 during 1977, an increase of about 60 percent from the 1972 average of $31. Nationally, the industry had receipts of $85 per resi-

TABLE 2
Resident and Nonresident Person-Trips per Capita, by State: 1977

State	Person-trips per capita		State	Person-trips per capita	
	Residents	Visitors		Residents	Visitors
Nevada	.12	12.63	Kansas	1.04	1.42
Washington, D.C.	—	7.77	Kentucky	.63	1.41
Vermont	.12	5.98	Montana	2.31	1.34
New Hampshire	.18	5.08	Minnesota	2.41	1.33
Wyoming	1.80	4.81	Idaho	1.83	1.28
Delaware	.29	3.43	Indiana	.55	1.28
North Dakota	1.99	2.54	Oregon	1.94	1.28
New Mexico	1.81	2.53	Washington	1.78	1.23
Maine	.66	2.50	Rhode Island	—	1.16
South Carolina	1.29	2.13	Louisiana	.92	1.10
Florida	1.16	2.17	Massachusetts	.17	1.10
Colorado	1.56	2.05	Pennsylvania	.63	1.10
Arkansas	1.09	2.02	Nebraska	2.56	1.09
Utah	1.47	2.01	Alabama	.96	1.07
Wisconsin	1.96	1.96	Illinois	.65	1.05
Hawaii	.27	1.95	Connecticut	—	1.00
South Dakota	1.83	1.88	Ohio	.77	1.00
Arizona	1.79	1.81	Maryland	.38	.99
Tennessee	.95	1.79	Michigan	1.27	.89
Oklahoma	1.88	1.67	New Jersey	.22	.82
Virginia	1.00	1.66	Texas	1.96	.80
Missouri	1.22	1.60	New York	.72	.79
West Virginia	.40	1.58	Alaska	.58	.54
Mississippi	.70	1.55	California	1.91	.45
Iowa	1.50	1.53			
Georgia	1.04	1.44	United States	1.12	1.29
North Carolina	1.27	1.44			

SOURCE: Developed from U.S. Bureau of the Census, *1977 Census of Transportation, National Travel Survey, Travel during 1977* (Washington, D.C.: Superintendent of Documents, 1979), Table 28; and U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 794, Table 3.

TABLE 3
Selected Travel-Related Statistics for the Top 20 States in 1977

State	1972	1977	Percentage change
	Lodgings industry		
	(receipts in millions of dollars)		
California	1,065	1,937	82
Nevada	738	1,733	135
Florida	1,042	1,577	51
New York	918	1,295	41
Texas	499	912	83
Illinois	447	776	74
Pennsylvania	457	712	56
Hawaii	242	549	127
Ohio	291	503	73
Georgia	257	462	80
Michigan	278	453	63
Virginia	249	452	82
New Jersey	278	390	40
Massachusetts	237	351	48
Missouri	221	333	51
Tennessee	168	323	92
Louisiana	157	314	100
North Carolina	181	311	72
Colorado	188	306	63
Minnesota	189	302	60
United States	10,638	18,453	73
	Eating and drinking places		
	(receipts in millions of dollars)		
California	4,435	7,295	64
New York	3,642	4,345	19
Texas	1,671	3,337	100
Illinois	2,107	3,142	49
Ohio	1,842	2,680	45
Pennsylvania	1,716	2,456	43
Florida	1,527	2,665	75
Michigan	1,564	2,248	44
New Jersey	1,344	1,715	28
Massachusetts	1,190	1,628	37
Wisconsin	831	1,110	34
Indiana	880	1,320	50
Virginia	621	1,207	37
Missouri	732	1,195	63
Washington	656	1,182	80
Georgia	655	1,178	80
North Carolina	576	1,135	97
Maryland	693	1,101	59
Minnesota	628	948	51
Tennessee	485	936	93
United States	35,048	55,581	59
	Vehicle miles driven		
	(millions of miles)		
California	126,488	150,300	19
Texas	76,690	99,266	29
Pennsylvania	67,034	72,269	8
New York	74,649	71,348	− 4
Ohio	63,505	70,082	10
Florida	54,589	67,007	23
Illinois	59,383	66,947	13
Michigan	57,817	63,361	10
New Jersey	47,082	50,893	8
Georgia	33,868	42,646	26
Indiana	36,785	41,322	12
North Carolina	34,031	40,310	18
Virginia	32,717	38,101	16
Tennessee	27,504	36,416	32
Massachusetts	29,442	33,779	15
Missouri	29,248	33,329	14
Wisconsin	27,566	31,572	14
Minnesota	24,878	28,143	13
Alabama	19,032	28,012	47
Washington	22,363	27,449	23
United States	1,268,342	1,476,567	16

TABLE 3 (Cont.)
Selected Travel-Related Statistics for the Top 20 States in 1977 (Cont.)

SOURCE: U.S. Bureau of the Census, *1972 Census of Selected Service Industries Area Statistics* (Washington, D.C.: Superintendent of Documents, various dates, depending on the state), Table 1 in each of the relevant state reports; U.S. Bureau of the Census, *1972 Census of Retail Trade, Area Statistics* (Washington, D.C.: Superintendent of Documents, various dates, depending on the state), Table 2 in each of the relevant state reports; U.S. Bureau of the Census, *1977 Census of Service Industries, Area Statistics, Advance Report* (Washington, D.C.: Superintendent of Documents, various dates, depending on the state), Table 1 in each of the relevant state reports; and U.S. Federal Highway Administration, *Highway Statistics* (Washington, D.C.: Superintendent of Documents, annually), Table VM-2.

declined, but those who did come for this purpose stayed dent, a gain of 67 percent over the 1972 figure of $51. In per capita rankings, Michigan slipped from 43 to 46.

The term "eating and drinking places" is used for the industry comprised of establishments that derive most of their revenues from the sale of prepared food and drink, or from alcoholic beverages sold for consumption on the premises. This industry includes fast food merchants such as MacDonalds and Tastee Freeze, but not party stores. In total receipts of eating and drinking places, Michigan ranked eighth during 1977, down from seventh in 1972. On the basis of per capita receipts by eating and drinking places, Michigan went from 18 to 20 in the rankings.

All these figures are only crude travel indicators. Most restaurants serve primarily the local market, not travelers. Furthermore, an appreciable, although unknown, proportion of hotel and motel receipts is derived from serving nearby residents in the bar and restaurant. However, the data do suggest that travel is a considerably less important component in Michigan's economy as compared to the nation's. In general, the National Travel Survey evidence that Michigan's share of travel declined between 1972 and 1977 is borne out by the Census Bureau information.

These points are corroborated in materials prepared by the U.S. Travel Data Center for 1972 and 1976. The center, an independent, nonprofit research and educational organization, estimated that travel-generated business receipts in Michigan amounted to $1.4 billion during 1972.[2] This placed Michigan eleventh from the bottom in U.S. domestic travel expenditure as a percentage of total income generated in the state. By 1976, the Michigan figure had grown to $3.8 billion, a gain of 179 percent.[3] For the nation as a whole, domestic travel expenditures increased almost 200 percent.

A recent study by Michael J. Ellerbrock and James C. Hite focused strictly on tourism.[4] Their statistical model ranks Michigan thirty-sixth in the total number of jobs generated by tourism and forty-fifth in tourist employment as a percentage of total labor force. They used data for 1975.

Concluding Remarks

Michigan is so committed to the manufacture of motor vehicles that all other economic activity seems to pale in comparison. In northern Michigan, however, where there is almost no heavy industry, the economy depends on tourism to a very considerable extent. It is the lifeblood of Mackinac County. The restaurants, motels, and shops on Mackinac Island and in St. Ignace provide livelihoods for residents as well as summer jobs for college students throughout the state. Also, travel to northern Michigan is an important amenity to those who work in the southern cities. That Michigan's tourist industry has been affected by high gasoline prices represents a loss to all of us.

In contrast to tourism, the business-convention type of travel in this state is expanding. Moreover, there is a building boom in motels, hotels, and convention centers that portends more of the same for southeastern Michigan, Grand Rapids, and Traverse City.

CITATIONS

1. Bureau of the Census, *1977 Census of Transportation, National Travel Survey, Travel during 1977* (Washington, D.C.: U.S. Government Printing Office, 1979), p. xxv.
2. Travel Data Center, *1972 National Travel Expenditure Survey* (Washington, D.C.: 1973), p. 45.
3. U.S. Travel Data Center, *The Impact of Travel on State Economies, 1976* (Washington, D.C.: 1978), p. 21.
4. Michael J. Ellerbrock and James C. Hite, "Factors Affecting Regional Employment in Tourism in the United States," *Journal of Travel Research* 18 (Winter 1980): 30.

BRIEFS

As of 31 December 1978, regulatory **loan companies** showed assets of $435 million, an increase of 6.5 percent over December 31, 1977, according to the *Annual Report, Financial Institutions Bureau, Calendar Year 1978*, recently released. Loans outstanding increased by 2.6 percent during 1978, compared to an increase of 1.7 percent in 1977. Income before taxes and interest on borrowed funds increased 8.97 percent in 1978, compared to a 14.08 percent increase during the previous year. Total operating income rose by 2.9 percent, while total operating expenses declined by one percent. Net earnings, before interest paid, to average assets increased to 7.38 percent, compared to 6.94 percent in 1977.

During 1978, the number of regulatory loan licenses decreased from 387 to 375; 462 examinations were conducted during the year. As a result of these examinations, overcharges in excess of $48,000 were returned to borrowers.

On December 21, 1978, Governor William Milliken signed into law an amendment raising the statutory loan limit from $1,500 to $3,000. Maximum rates of charge were also altered to those recommended by the Governor's Advisory Commission on the Regulation of Financial Institutions. The amended law took effect March 30, 1979.

Steve Pscodna of the Michigan Agricultural Reporting Service commented on the increase in U.S. **crop exports.** Figures released by the U.S. Department of Agriculture in late January show exports of U.S. grains and soybeans running substantially ahead of year-ago levels despite the suspension of grain shipments to the Soviet Union, said the World Food and Agricultural Outlook and Situation Board.

Since the January 4 suspension of shipments to the Soviet Union, inspections for export of grain and soybeans have been over one-third higher than for the same three weeks in 1979.

Despite the suspension of sales, total agricultural exports in 1979/80 are still expected to set records. Department officials project total exports of $36.4 billion, compared to the 1978/79 record of $32 billion. Officials also project total exports to reach a record volume of around 150 million tons, far exceeding last year's record 137.5 million tons.

Wheat exports are still expected to surpass last year's by more than 10 percent, and total 36.1 million tons. Feedgrain exports are projected at a record 65.9 million tons, compared to last year's 60.2 million tons. Soybean sales abroad are forecast at 22.2 million tons, up from last year's record 20.5 million tons.

The largest purchaser of U.S. grains and soybeans again will be Japan, with imports surpassing those of the USSR every year. Other leading markets for U.S. grains and soybeans this year are the European Community, Latin America and Eastern Europe. Based on current projections, Mexico, China, Egypt and Spain are expected to import more U.S. grains than had earlier been anticipated.

The value of exports of **automotive products** to Canada totaled $11.3 billion during the first eleven months of 1979, a gain of 13 percent over the comparable 1978 period. Imports from Canada declined from $9.5 to $9 billion. The net Canadian-U.S. trade balance, in favor of the latter, mushroomed from $495.5 million during the January–November 1978 period to $2.2 billion during the same eleven months of 1979.

The average rate of **unemployment** in 1979 was 6.5 percent in Michigan, according to a recent news release from the Bureau of Labor Statistics. States with rates higher than ours were Hawaii (8.7 percent), Alaska (8.3 percent), Delaware (7.1 percent), Maine (7.1 percent), Oregon (6.7 percent), and Washington (6.6 percent). Rhode Island also experienced 6.5 percent unemployment. The figure for the nation was 5.1 percent.

THE MICHIGAN STATE ECONOMIC RECORD
DIVISION OF RESEARCH
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
MICHIGAN STATE UNIVERSITY
BERRIEN HALL
EAST LANSING, MICHIGAN 48824

U 3120-1
read 4/24/80

GOVERNMENT UPDATE

by DAVID I. VERWAY, *Research Professor, Division of Research, Graduate School of Business Administration, Michigan State University*

Michigan's tax burden reached a new peak during 1979 according to preliminary estimates from the Tax Foundation, Inc., and the Bureau of the Census. Combined federal, state, and local levies of $31 billion were 37.2 percent as great as the state's total personal income. The national figure was 36.2 percent. The 1978 figures were 34.8 percent (Michigan) and 35.5 percent (United States).

Federal taxes provided the major impetus. Local tax burdens increased by small amounts in the state and the nation. Nationally, state taxes as a percentage of personal income dropped, whereas in Michigan they rose slightly. Michigan redesigned its tax structure in 1976, making it relatively inelastic with respect to income. In contrast, during the previous slowdown in general economic activity in Michigan, during 1974 and 1975, the state tax burden declined. Local taxes have always been relatively inelastic because the stable property tax is a major component (see Table 1).

As it is used here, the term *tax burden* refers to the relationship between taxes and personal income. This yardstick is crude, among other reasons because a not inconsiderable proportion of taxes is levied on businesses, not households. Michigan's Single Business Tax is an example. While it is no doubt true that businessmen pass their taxes on to the consumer to the extent possible, it is also true that the tax is reflected in reduced earnings by stockholders, management, and labor. Finally, the SBT is, to an unknown extent, passed on to consumers and stockholders in other states, and they return the gesture. Texans, for example, benefit from our gasoline purchases.

The federal tax burden is approximately double the combined state and local levies. However, some of that money finds its way back through federal aid to state and local units. During 1979, about one of every six dollars in federal taxes was returned to Michigan in this manner. In 1976, however, a year of relatively low taxation compared with the decade average, Washington returned over 20 percent of taxes collected here to Michigan state and local units. Consequently, the net burden of federal taxes increased even more sharply than the gross, from 17.6 percent during 1976 to 21 percent in 1979. Three years ago the net federal tax burden on the nation as a whole was 17 percent; last year it was 21 percent (see Table 2). State governments have borne the brunt of Washington's parsimony with the taxes it collects (see Table 1).

States also have revenue sharing programs with local units. In Michigan, portions of the personal income tax, cigarette tax, alcoholic beverage taxes, sales tax, inheritance tax, and intangibles tax are earmarked for schools, cities, villages, townships, and counties, as well as for the state general fund. The state also makes grants to local units from this fund. During 1979, the ratio of state aid to personal income in Michigan was the same as during 1976, whereas nationally the figure declined.

Tax figures adjusted for revenue sharing reveal a large increase in the federal burden, a modest increase in the state burden, and a modest decline in the local burden since 1976 (see Table 2). In comparison with 1968, the local burden has gained most rapidly, followed by the state, with a modest increase at the federal level. Over the decade there has

TABLE 1
Taxes, Federal Aid, and State Aid as a Percentage of Total Personal Income, Michigan and the United States, Fiscal Years 1967–1979

	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
Tax burden													
Federal taxes													
Michigan	n.a.	23.0	n.a.	24.2	n.a.	21.8	n.a.	22.3	n.a.	22.2	n.a.	23.0	25.1
All states	n.a.	22.3	n.a.	23.9	n.a.	21.8	n.a.	22.1	n.a.	21.2	n.a.	23.5	24.2
State taxes													
Michigan	5.4	6.2	6.6	6.4	6.7	7.4	7.7	7.1	6.5	6.6	7.2	7.2	7.3
All states	5.3	5.6	5.9	6.1	6.2	6.7	6.9	6.7	6.7	6.8	7.0	7.0	6.9
Local taxes													
Michigan	4.2	4.3	4.4	4.6	4.9	5.3	4.8	4.9	5.1	5.2	4.8	4.6	4.8[a]
All states	4.8	4.8	4.9	5.0	5.2	5.6	5.4	5.1	5.1	5.1	5.2	5.0	5.1[a]
State and local taxes													
Michigan	9.6	10.5	11.0	11.0	11.6	12.7	12.5	12.0	11.6	11.8	12.0	11.8	12.1
All states	10.1	10.4	10.8	11.1	11.4	12.3	12.3	11.8	11.8	11.9	12.2	12.0	12.0
Federal, state, and local taxes													
Michigan	n.a.	33.5	n.a.	35.2	n.a.	34.5	n.a.	34.3	n.a.	34.0	n.a.	34.8	37.2
All states	n.a.	32.7	n.a.	35.0	n.a.	34.1	n.a.	33.9	n.a.	33.1	n.a.	35.5	36.2
Federal aid													
To state government													
Michigan	1.9	1.9	1.9	1.9	2.3	2.6	2.9	2.7	3.0	3.3	3.0	2.9	2.8[a]
All states	2.3	2.4	2.4	2.5	2.7	3.0	3.2	2.9	3.0	3.2	3.2	3.1	3.0[a]
To local government													
Michigan	.2	.2	.2	.3	.4	.6	.9	.8	.9	1.3	1.2	1.3	1.3[a]
All states	.3	.3	.3	.3	.4	.5	.8	.9	.9	1.0	1.1	1.2	1.2[a]
Total													
Michigan	2.1	2.1	2.1	2.2	2.7	3.2	3.8	3.5	3.9	4.6	4.2	4.2	4.1[a]
All states	2.6	2.7	2.7	2.8	3.1	3.5	4.0	3.8	3.9	4.2	4.3	4.3	4.2[a]
State aid to local governments													
Michigan	3.4	3.2	3.4	3.4	3.8	3.8	3.7	3.9	3.9	3.9	4.1	4.0	3.9[a]
All states	3.1	3.1	3.3	3.4	3.8	4.0	4.0	4.0	4.3	4.3	4.2	4.1	4.0[a]

SOURCE: Developed from Tax Foundation, Inc., *Monthly Tax Features*, February 1980, p. 4; Bureau of the Census, *State Government Tax Collections in 1979* (Washington, D.C.: 1980), GF79, No. 1, Table 2; Bureau of the Census, *Governmental Finances in 1977–78* (Washington, D.C.: 1980), GF78, No. 5, Table 5; and similar documents for 1975–1976 (Table 17); 1974–1975 (Table 17); 1972–1973 (Table 17); 1970–1971 (Table 17); 1969–1970 (Table 17); and 1968–1969 (Table 17); Bureau of the Census, *1977 Census of Governments*, vol. 4, *Governmental Finances*, no. 5, *Compendium of Government Finances* (Washington, D.C.: 1979), Table 47, and similar documents for 1972 (Tables 3 and 46) and 1967 (Tables 3 and 46); and Bureau of Economic Analysis, Regional Economics Information System.
n.a. not available.
a. Author's estimates.

been a very rapid rise in federal revenue sharing and a small gain in state revenue sharing.

Governments also collect various fees and a miscellany of other revenues. Among state and local units, this "all other" category has grown rapidly. However, it still is a minor source of revenue, accounting for about 18 percent of state and local resources in this state (3.8 as a percentage of personal income).

TABLE 2
Tax Burden before and after Federal and State Aid, Michigan and the United States, Fiscal Years 1968, 1976, and 1979

	Michigan			*United States*		
	1968	*1976*	*1979*	*1968*	*1976*	*1979*
Taxes collected as a percentage of personal income						
Federal	23.0	22.2	25.1	22.3	21.2	24.2
State	6.2	6.6	7.3	5.6	6.8	6.9
Local	4.3	5.2	4.8	4.8	5.1	5.1
Total	33.5	34.0	37.2	32.7	33.1	36.2
Tax burden after revenue sharing						
Federal	20.9	17.6	21.0	19.6	17.0	20.0
State	4.9	6.0	6.2	4.9	5.7	5.9
Local	7.7	10.4	10.0	8.2	10.4	10.3
Total	33.5	34.0	37.2	32.7	33.1	36.2

SOURCE: Developed from Table 1.

FEDERAL SPENDING

Spending figures for all units of government for 1979 have not been compiled at this writing. Those for 1978 show that the burden of national defense declined substantially between 1968 and 1976, and that trend has continued. Federal direct expenditure from trust funds grew substantially more rapidly than income between 1968 and 1976, and that trend has continued. Social Security is the major federal trust fund. Others are federal employee retirement, railroad retirement, and veterans' life insurance. Trust fund expenditures surpassed outlays for national defense during the mid-1970s, and by 1978 the difference amounted to $16 billion, or one percent of the total personal income statistic.

The combined burden on taxpayers of public welfare, health, and veterans' programs administered from Washington grew rapidly between 1968 and 1976. Since then, these social service and income maintenance programs have declined relatively (see Table 3).

TABLE 3

Direct Federal Expenditures and Revenues as a Percentage of Personal Income, Fiscal Years 1968, 1976, and 1978

	1967	1976	1978
Expenditures			
Defense	13.0	7.6	6.9
Insurance trust	5.0	7.7	7.9
Social services and income maintenance	1.5	2.4	2.3
All other	6.3	6.7	7.0
Total	25.8	24.4	24.1
ITEM: federal wages and salaries	6.3	4.9	4.5
Revenues			
Taxes	22.3	21.2	23.5
Other	3.3	3.5	2.5
Total	25.6	24.7	26.0

SOURCE: Developed from Bureau of the Census, *Governmental Finances in 1977–78* (Washington, D.C.: 1980), GF78, No. 5, Table 2, and a similar document for 1967–1968 (Table 2); and Bureau of Economic Analysis, Regional Economics Information System.

The overall trend of a decade of diminishing importance of direct federal expenditure might seem to contradict the increasing burden of federal taxes. The cause was revenue sharing, between 1968 and 1976, and a drop in the size of the deficit in federal government finances since 1976.

STATE AND LOCAL SPENDING

Among other things, the 1970s will be known for the enormous pressures on state governments, particularly in Michigan. Between 1970 and 1975, the number of people drawing welfare checks in this state more than tripled. The nation, including Michigan, was caught in a crime wave. Cleaning up the environment became urgent. The inevitable result was escalating costs for public welfare, police and fire protection, waste treatment, and general government control. From a ranking of 26 in state and local government expenditures as a percentage of personal income in 1968, Michigan rose to 23 in 1976. In addition to the taxpayer, students and faculty at Michigan's colleges and universities bore the brunt. State higher education appropriations declined from 1.2 to one percent of personal income between 1968 and 1976 (see Table 4). Highway spending and state aid for schools kept pace with the general growth of the Michigan economy. By 1978, the welfare crunch had abated, and spending for highways had declined in importance, enabling the state to shift resources to public schools. Meanwhile, local support of public schools decreased as a percentage of personal income; consequently, the burden of providing high school degrees has diminished since 1976, both in Michigan and in the nation.

Overall, toward the end of the decade, the financial burden of state and local government was slightly less than the national average in Michigan, whereas in the mid-1970s it was appreciably greater.

TABLE 4

Direct General Expenditures of State and Local Governments, Michigan and the United States, by Category, Fiscal Years 1968, 1976, and 1978

	Michigan			United States		
	1968	1976	1978	1968	1976	1978
Local schools						
State aid	2.2	2.2	2.4	1.6	2.0	1.9
Local effort	2.6	3.5	2.6	2.9	3.1	2.7
Total	4.8	5.7	5.0	4.5	5.1	4.6
State higher education appropriations	1.2	1.0	1.0	1.0	1.0	1.0
Local higher education	.2	.3	.4	.2	.3	.3
Welfare	1.3	3.2	2.8	1.5	2.4	2.3
Health and hospitals	1.3	1.6	1.6	1.2	1.6	1.5
Highways	1.6	1.6	1.2	2.2	1.8	1.5
Police	.5	.8	.8	.5	.7	.6
Fire protection	.3	.3	.3	.3	.3	.3
Sewerage	.3	.5	.5	.3	.5	.4
Other	3.2	4.7	4.2	3.7	5.3	5.4
Total	14.8	19.7	17.8	15.4	19.0	17.9

SOURCE: Developed from Bureau of the Census, *Governmental Finances in 1977–78* (Washington, D.C.: 1980), GF78, No. 5, Table 12, and similar documents for 1975–1976 (Table 18) and 1967–1968 (Table 18); and Bureau of Economic Analysis, Regional Economics Information System.

TABLE 5

Full-time Equivalent Employment of State and Local Governments per 10,000 Population in Michigan and the United States, by Function, October 1968, 1976, and 1978

	Michigan			United States		
	1968	1976	1978	1968	1976	1978
Education						
Local schools						
Instructional staff	115.5	127.1	135.2	111.7	126.9	128.0
Other	53.0	72.5	69.1	45.5	53.0	55.6
Total	168.5	199.6	204.2	157.1	179.9	183.6
Higher education						
Instructional staff	15.3	19.8	19.9	14.0	19.0	19.4
Other	32.0	36.9	39.9	21.9	30.2	31.4
Total	47.3	56.7	59.8	35.9	49.2	50.8
Other	1.9	2.7	2.6	2.8	4.0	4.2
Total education	217.6	258.9	266.7	195.8	233.1	238.6
Welfare	6.6	16.4	17.9	11.1	15.9	16.7
Hospitals	42.4	40.6	45.8	39.3	44.7	48.0
Health	4.0	7.1	8.4	5.3	8.8	9.6
Highways	21.2	19.0	17.3	28.1	25.7	25.5
Police	18.5	23.3	26.4	20.5	25.4	26.0
Fire protection	8.5	8.3	8.3	9.0	10.0	9.8
Sewerage	2.2	3.1	3.0	2.8	3.8	4.0
Other sanitation	4.7	3.3	4.3	5.9	5.7	5.7
Parks and recreation	4.9	5.1	6.0	5.6	6.9	7.5
Natural resources	4.1	5.6	6.3	7.5	8.2	8.7
Correction	5.4	7.8	9.5	6.4	9.6	10.2
Local libraries	2.4	2.2	2.1	2.7	3.0	3.0
Employment security administration	3.1	5.4	4.3	3.3	4.8	4.8
Financial administration	9.8	10.2	11.7	10.2	12.1	12.9
General control	9.7	17.0	17.8	11.5	15.9	17.0
Water supply	4.6	4.7	5.3	5.4	5.5	5.6
Other local utilities	5.0	5.2	5.8	7.6	8.8	9.0
State liquor stores	.7	.6	.7	.7	.7	.6
Other	11.4	17.5	19.9	17.1	26.8	28.5
Total	386.9	461.4	487.4	395.9	475.5	491.8

SOURCE: Bureau of the Census, *Public Employment in 1978* (Washington, D.C.: 1979), GE78, No. 1, Table 11, and similar documents for 1976 (Table 11) and 1968 (Table 11).

(Continued on page 6)

The MICHIGAN STATE ECONOMIC RECORD

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	43.6	41.0	39.2 (Nov.)
Average weekly hours, U.S.	40.9	40.3	40.2 (Nov.)
Average hourly earnings, Michigan ($)	8.52	8.91	8.87 (Nov.)
Average hourly earnings, U.S. ($)	6.38	6.82	6.85 (Nov.)
U.S. motor vehicle production (units)	1,053,539	696,353	791,521 (Feb.)
Michigan electricity usage (mil. kwh.)	5,830	5,701	5,607 (Nov.)
Industrial (mil. kwh.)	2,846	2,679	2,544 (Nov.)
Residential (mil. kwh.)	1,714	1,652	1,740 (Nov.)
Raw steel production:			
Michigan (000 net tons)	1,002	751	839 (Jan.)
United States (000 net tons)	11,105	9,996	10,701 (Jan.)
Consumer price index (1967 = 100)			
Detroit area	204.9	233.3	236.4 (Jan.)
United States	204.7	229.9	233.3 (Jan.)
U.S. wholesale price index (1967 = 100)	220.8	249.4	254.7 (Jan.)
Michigan farm prices received index (1967 = 100)	220	236	232 (Jan.)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, January 1979 - January 1980

(Thousands of dollars)

Area	Nonresidential 1979	Nonresidential 1980	Nonresidential Percentage change	Residential 1979	Residential 1980	Residential Percentage change	Total[a] 1979	Total[a] 1980	Total[a] Percentage change
Ann Arbor	7,588	2,413	− 68	954	2,310	+100	8,512	4,723	− 45
Battle Creek	247	747	+100	2,284	518	− 77	2,531	1,265	− 50
Bay City	1,100	540	− 51	366	252	− 31	1,466	792	− 46
Detroit	53,958	58,206	+ 8	70,173	31,197	− 56	124,131	89,403	− 28
Flint	3,377	11,281	+100	3,263	1,501	− 54	6,640	12,782	+ 93
Grand Rapids	13,077	40,432	+100	9,440	7,105	− 25	22,517	47,537	+100
Jackson	701	3,501	+100	459	578	+ 26	1,160	4,079	+100
Kalamazoo-Portage	620	1,577	+100	2,105	3,167	+ 50	2,725	2,744	+ 74
Lansing-East Lansing	2,976	6,249	+100	5,040	7,761	+ 54	8,016	14,010	+ 75
Muskegon-Norton Shores-Muskegon Heights	656	562	− 14	1,012	1,843	+ 82	1,688	2,405	+ 44
Saginaw	1,668	1,998	+ 20	1,161	3,645	+100	2,829	5,643	+ 99
Michigan	106,718	136,387	+ 28	108,928	79,742	− 27	215,646	216,129	+ .2
United States	3,958,700	4,351,800	+ 10	4,530,000	4,100,000	− 9	8,488,700	8,451,800	− .4

SOURCE: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing-East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon-Norton Shores-Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1979 and 1980 figures for nonbuilding construction contracts were $114,591,000 and $27,094,000 respectively, or a decrease of 76 percent. U. S. figures for nonbuilding construction contracts were $3,297,600,000 and $2,628,400,000 or a decrease of 20 percent.

Year-to-Year Change in Selected Economic Indicators

Indicator	First quarter 1979	Percentage change from previous year: 1979 April	May	June	July	August	September	October	November	December	1980 January	February
Civilian employment												
United States	3.8	2.7	2.5	2.2	2.8	2.2	2.7	2.1	2.0	2.2	1.8	1.6
Michigan	2.2	− .1	3.2	2.9	3.5	3.1	1.6	1.6	1.6	− .7	− 2.3	− 3.3
Detroit area[a]	1.3	− 9	3.1	2.7	3.0	2.3	1.1	.8	.7	− 1.3	− 3.4	
Outstate[b]	3.0	.6	3.2	3.0	3.9	3.9	2.1	2.4	2.5	0	− 1.2	
Wage and salary jobs[c]												
United States	4.6	3.6	3.7	3.5	3.5	3.2	3.1	2.9	2.7	2.6	2.3	
Michigan	3.3	1.1	1.6	1.4	.9	− .3	− 1.0	− 1.1	− 1.7	− 2.3	− 2.3	
Detroit area[a]	2.4	− .2	.9	.5	−	− 1.8	− 2.3	− 2.5	− 3.2	− 3.2	− 4.5	
Outstate[b]	4.1	2.5	2.4	2.3	1.9	1.3	.4	.2	− .2	− 1.5	− .1	
Average workweek[d]												
United States	1.4	− 3.7	− .7	− .7	− .7	− 1.0	− 1.2	− 1.0	− 1.7	− .6	− .3	
Michigan	2.1	−12.9	− .9	− 2.6	− 4.2	− 4.7	− 6.5	− 8.1	−10.1	− 9.4		
Average weekly earnings[e]												
United States	10.5	4.3	8.4	8.2	7.8	7.2	6.8	6.8	5.5	7.4	7.1	
Michigan	12.4	− 6.0	8.8	5.7	4.4	2.5	− 3.9	− 1.9	− 6.3	− 4.7		
Motor vehicle assembly												
United States	9.7	−16.8	1.9	− 7.6	− 6.2	−28.8	−22.4	−20.1	−31.8	−33.5	−38.2	−33.9
Michigan	14.5	−17.9	− 1.3	− 5.1	−13.3	−30.6	−27.8	−46.8	−29.8	−41.1		
General Motors	20.4	− 5.2	10.5	− .4	−14.2	−14.9	−24.2	−52.4	−17.8	−27.6		
Ford	19.4	− 7.5	− 8.0	−12.0	18.2	−28.9	−17.8	−18.2	−28.3	−51.4		
Chrysler	− 8.0	−61.1	−24.2	−12.9	−41.6	−76.2	−53.6	−62.4	−64.8	−69.1		
Steel tonnage poured												
United States	10.4	5.8	3.8	3.1	3.8	− 2.1	− 8.1	−10.7	−14.2	−15.4	− 3.6	
Michigan	20.6	22.4	13.7	7.8	− 1.0	.2	−13.8	−20.5	−18.2	−18.9	−16.3	
Commercial electricity consumption												
United States	5.3	6.7	6.7	1.0	− .2	.5	− .6	1.0	2.2			
Michigan	6.1	6.1	8.7	3.0	3.5	1.0	− 5.2	1.0	3.5			
Industrial electricity consumption												
United States	8.8	8.9	5.7	3.5	3.8	2.4	− .1	.3	.1			
Michigan	10.9	− 2.1	3.5	1.7	.5	− 6.3	− 7.6	−10.1	−11.2			
Nonresidential construction contracts												
United States	28	23	1	22	1	10	− 6	14	− 6	+18	10	
Michigan	62	30	35	162	−17	2	−	− 5	28	− 8	28	
Residential construction contracts												
United States	13	−13	4	− 8	3	− 2	4	− 3	−21	− 9	− 9	
Michigan	8	− 3	15	7	−10	24	− 6	−25	−24	−28	−27	
Nonbuilding construction contracts												
United States	24	81	−32	19	− 9	−40	−11	−41	7	+19	−20	
Michigan	−50	55	− 3	−17	−67	−79	−82	28	−70	−71	−76	
Retails sales												
United States	13.5	10.3	9.1	7.3	8.1	12.3	9.4	11.3	11.3	8.1		
Michigan	17.0	11.2	9.5	7.2	7.8	6.4	3.0	5.4	6.4	4.6		
Detroit area[a]	18.7	14.0	9.5	9.2	11.1	5.6	1.7	1.6	4.9	3.3		
Detroit city	8.6	4.2	4.2	1.3	6.1	1.0	− 3.6	− 5.8	− 1.3	− 3.1		
Suburbs	21.0	16.2	10.8	10.9	12.2	6.6	2.8	3.1	6.2	3.3		
Outstate[b]	15.1	7.8	9.3	4.8	4.2	7.3	4.5	10.1	8.0	5.8		
Consumer price index												
United States	9.8	10.4	10.8	10.9	11.3	11.8	12.1	12.2	12.6	13.3	13.9	
Detroit	11.9	12.1	11.2	10.7	12.8	13.5	13.2	13.1	14.5	15.3	15.7	

SOURCE: Michigan Employment Security Commission, special release, Bureau of Labor Statistics, *The Employment Situation* (monthly); Motor Vehicle Manufacturers Association, special release; American Iron and Steel Institute, special release; Energy Information Administration, special release; F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases (monthly); and Bureau of the Census, *Monthly Retail Trade*.

a. Wayne, Oakland, Macomb, Livingston, Lapeer, and St. Clair counties.
b. Michigan minus Detroit area.
c. The number of wage and salary jobs, except agricultural, reported by employers.
d. Average hours worked by manufacturing production workers.
e. Average earnings among manufacturing production workers.

Government Update

(Continued from page 3)

EMPLOYMENT

Approximately 3.5 million people served in the U.S. armed forces during the late 1960s; by the late 1970s the figure had declined to about 2 million. The number of federal civilian employees has remained fairly constant, at about 2.8 million. Overall, therefore, federal employees have been a sharply declining component in the working population. Their pay declined from 6.3 percent of personal income in 1968, to 4.9 percent in 1976, to 4.5 percent in 1978. Federal administration is costing less and less, in this sense, because increasingly Washington merely shifts financial resources from some sectors of the economy to others.

State and local administrations have grown rapidly, however, because they have had the primary responsibility for delivering the social services increasingly in demand. The employment figures in Table 5 reflect the dollar shifts discussed in the preceding section. Welfare administration has gained dramatically, while that for highways has declined. Law enforcement and correction have gained. The relative number of teachers per 10,000 population increased between 1968 and 1976, a period of growing enrollment in public schools, and it has continued to increase, despite declining enrollments. This phenomenon is even more pronounced in Michigan than nationally. Moreover, since 1976, Michigan teachers' salaries have grown much more rapidly than government salaries generally and more rapidly than college faculty salaries. Notwithstanding the strains imposed by welfare, crime, and pollution, the decade of the 1970s was a golden one for Michigan public school teachers, just as the 1960s were for college professors in the state.

TABLE 6
Average Earnings of Full-Time State and Local Government Employees in Michigan and the United States, October 1968, 1976, and 1978

	Michigan			*United States*		
	1968	*1976*	*1978*	*1968*	*1976*	*1978*
Public school faculty	858	1,384	1,612	725	1,157	1,297
College faculty	1,088	1,765	2,031	1,045	1,635	1,733
Other employees	629	1,151	1,297	555	972	1,085
All employees	702	1,189	1,356	607	1,074	1,139

SOURCE: Bureau of the Census, *Public Employment in 1978* (Washington, D.C.: 1979), GE78, No. 1, Table 7, and similar documents for 1976 (Table 7) and 1968 (Table 6).

A Note on the State Capitol

The *Detroit News Magazine* of 4 March 1979 carried an interesting article on the state capitol, from which we quote.

> The decision to build the capitol in Lansing came only after months of haggling in the state legislature. When Michigan was granted statehood in 1837, Detroit was named the temporary capital, with the stipulation that a permanent site be selected by 1847. That year, the legislature became embroiled in seemingly endless debate as representatives from competing villages and towns tried to win selection as the location for the new capitol building.
>
> When the legislative clerk finally announced that the capital city would be placed in the township of Lansing, loud guffaws resounded through the chambers. Some legislators thought it was a joke since Lansing township was little more than a virgin forest on the Grand River, populated by a few log cabin families. Yet two months later, the measure was passed and signed into law by Governor William L. Greenly. The taming of the wilderness had begun.
>
> But what to call that wilderness was another matter. No one could agree on a name for the new capital. Among those considered were Thorbush, Marcellus, Swendenborg, Algoma, and Pewanogawink. For the first two months, the capital was called Michigan until the legislators grew tried of the repetitive Michigan, Michigan, address and finally settled on Lansing.
>
> Around 1861, rumbling over the inadequacy of the legislative facilities began. Governor Henry P. Baldwin was the first to suggest building a new capitol. In 1871, he persuaded the penny-pinching Grangers to go along.

A pamphlet published by WVIC radio station in Lansing contains additional information about the building; a paraphrase follows.

The state capitol, which stands on eleven acres of land, was dedicated on 1 January 1879. It took six years to complete the building, which cost $1.5 million. Its construction required 15 million bricks, 16,000 square yards of plaster, copper from the Upper Peninsula, stone from five states, tin from Wales, and plate glass from England. On 24 January 1872, the *Tuebor* ("I will defend") design of Elijah E. Meyers, a self-taught architect from Illinois, was chosen over 22 others. Done in the Palladian style, his cruciform floor plan with high central dome was simple and relatively inexpensive to construct.

The cornerstone was laid on 2 October 1873. It contained a copper receptacle holding 48 items, among them a copy of the state's constitution, a Bible, a history of Michigan, coins, and a report on crime and pauperism in the state. (When the cornerstone was uncovered during rebuilding activity in November 1978, it was discovered that most of the contents had been virtually destroyed by moisture.) The cornerstone weighed five tons and was quarried from Cape Ann, Massachusetts. At the ceremony, 35,000 people watched a parade of 5,000 persons, including 25 bands, march down Michigan Avenue. Governor John J. Bagley gave a short speech before the stone was lowered into place.

The main portico of the capitol is supported by six Tuscan columns 20 feet high. Above are Ionic columns, then elaborate Corinthian columns under the balcony at the base of the dome. The statuary on the east pediment was designed by Louis T. Ives. It was sculpted by 28-year-old Herman Wehner, who emigrated to Saginaw from Prussia at age six. The bas-reliefs include three female figures. The central one, in Indian garb, represents Michigan. In one hand she holds a book, in the other a globe. To her right is Agriculture, to her left Commerce.

The twelve entrance doors—six at the front portico and two at each of the other entries—were of solid black walnut, more than 14 feet high and almost three inches thick. Doorknobs throughout the building were made of Michigan copper, adorned with apple blossoms or harvest scenes.

The building contains 268 rooms, two grand staircases, and an unusual steam elevator running from the basement to the fourth floor. The oak and iron elevator was handsomely furnished with French veneered panels, moldings and carved work of highly variegated black walnut, stained glass, and a leather sofa.

More than 1,700 gas burners were installed throughout the capitol. Most were lit by hand, but 371 had intricate wiring systems that permitted "electrical ignition." There were also networks for call bells and speaking tubes. The nineteen chandeliers, made of Keweenaw Peninsula copper, each weighed 300–400 pounds. They were designed by Tiffany's in New York, and the state seal appears on each.

The ceilings for the legislative halls were designed by George Mish and Brothers. The seals of each state were etched on panels of ruby and white glass, with the Great Seal of the United States over the entrance to each chamber. There were 170 panels in all, imported from Ravenshead and Sutton of Lancashire, England.

The dome of galvanized iron, with the lantern, is 267 feet above ground level. It covers the most impressive part of the building, the Rotunda, which is visible from three stories inside the capitol. The Rotunda floor is 44.5 feet in diameter and contains 976 blocks of glass. Light from below gives the optical illusion of a dome underneath. The ceilings in the Rotunda and corridors are done in fresco and have never been retouched.

At 9:30 A.M. on 1 January 1879, Governor Charles Crosswell accepted the building for the people of Michigan, the new legislature was convened, and 30 legislators took their seats.

The *Detroit News Magazine* notes that at the time the capitol was completed,

> Michigan's population was 1.5 million, and the state budget was $2 million. The capitol had only four full-time employes, and temporary help was hired when the legislature convened for five months every two years. Most of the lawmakers were farmers, who were paid $3 a day.

BRIEFS

Peter Jackson of the Michigan Agricultural Reporting Service made the following comments regarding **grain** supply and demand forecasts:

> In late January the World Food and Agricultural Outlook and Situation Board issued their latest supply and demand estimates for U.S. grain crops. The current estimates take into account the January 4 embargo against the USSR, as well as the final estimates of 1979 corn and soybean production.
>
> The major change from the mid-January estimate is in the area of corn exports for 1979–80. The corn export forecast has been raised 125 million bushels to 2,275 million, despite the embargo. The increase reflects Mexico's plan to import more U.S. corn.
>
> The recent upward revision of the already record U.S. soybean production, combined with smaller exports to the USSR has resulted in an increased estimate of soybean carryover stocks for 1979–80.
>
> Wheat also set a record in 1979. The increased production and a 75 million bushel reduction in the export forecast as a result of the embargo have combined to boost the expected carryover stocks of wheat.

The Michigan Agricultural Reporting Service has just released its estimates of **values of crops** produced in Michigan during 1979 (see Table 1). Edward Molenda, Jr., made the following comments:

> Driven strongly higher by a 22 percent boost in the value of field crops, the total value for all crops produced in Michigan during 1979 posted a 15 percent jump over a year ago. The main momentum behind the field crops' increase was a tremendous 110 percent leap in the value of the wheat crop as acreage and production returned to near normal levels. Although the season average price of corn increased 8 percent, the major contributor to the crop value rise of 32 percent was the record yield and production. Corn remains by far the leading Michigan crop in value of production. A 28 percent increase for the season average price of dry beans helped lift its value 42 percent above last season. Soybeans, on the other hand, had a 10 percent season average price dip, but still scored a 33 percent gain in crop value due to the record 1979 crop. The value of hay fell 12 percent mainly because of a lower season average price. Lower season average price and production knocked the value of potatoes down 10 percent. Higher production caused the value of spearmint oil to climb 13 percent. The value of red clover seed held steady.
>
> Commercial vegetables posted a 3 percent increase in value. A drop in production for many of Michigan's fruit crops resulted in a 14 percent decline in overall fruit value.
>
> Nationally, increasing values of production for major field crops were posted for corn, wheat, soybeans, hay and dry edible beans. The value of oats and barley declined.

TABLE 1
Michigan Crop Values
(Thousands of dollars)

Crop or class	*1979*	*1978*
Field and special crops	1,228,112	1,008,067
Corn	570,000	431,568
Soybeans	174,552	130,752
All hay	147,571	167,577
Dry beans	130,340	91,908
Wheat	124,894	59,400
Potatoes	40,979	45,479
Spearmint oil	1,475	1,310
Red clover seed	1,037	1,041
Fruit	164,198	191,710
Commercial vegetables	114,321	111,218
Total value	1,507,668	1,312,036

SOURCE: Michigan Agricultural Reporting Service, *Agriculture Across Michigan*, 15 February 1980, p. 2.

MICHIGAN STATISTICAL ABSTRACT

Fourteenth Edition, 1979

The attractions featured in the 1979 edition of the *Michigan Statistical Abstract* include an 18-page description of this state's economy published in about 1848. Another item of interest is the official version of "The Toledo War." Did you know that Alpheus Felch, our sixth governor, had served in that war?

A new chapter covers Michigan's role in the automotive industry. Included are excerpts and statistics from the 1905 Census of Manufactures, which treated automobiles as a separate subject for the first time. Did you know that by 1905 Michigan displaced Connecticut in capital invested in the automobile industry ($3.7 million), although Ohio ranked first in wage earners? In that year, the entire U.S. auto industry reported 11 women and 32 children employed.

Many data are not published elsewhere. Furthermore, in this latest edition, considerable resources have been devoted to meaningful rearrangement of raw data. For example, counties are listed according to their ranking in per capita income.

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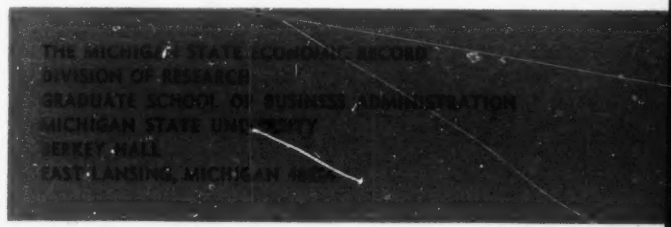

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(ISSN: 0026-2455)

A MONTHLY REPORT
ON BUSINESS CONDITIONS
IN MICHIGAN

Volume 22 No. 4
APRIL 1980

*Published by the
Division of Research
Graduate School of
Business Administration
Berkey Hall*

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EAST LANSING
MICHIGAN 48824

Published monthly, except July and August, when bimonthly. Second class postage paid at East Lansing, Michigan. Distributed on request to residents of the State of Michigan. Permission to reprint granted upon written request.

RETAIL TRADE CENSUS

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According to the most recent Census of Retail Trade, the ten fastest growing states in retail sales between 1972 and 1977 were Alaska, Wyoming, Nevada, Washington, Oregon, Idaho, Texas, Hawaii, Montana, and North Dakota. The slowest growing were New York, Rhode Island, Massachusetts, Connecticut, New Jersey, Delaware, Pennsylvania, Vermont, Illinois, and Maryland. Michigan was twelfth from the bottom among states, just ahead of Georgia. The Michigan figure was 55 percent, compared with a national rate of growth in retail sales of 58 percent during the five-year period.

In retail sales as a percentage of personal income, Michigan ranked 40 in both 1972 and 1977. States that rank high on this score are those that are popular with tourists and thus are "exporters" of retail trade. Montana ranked first in 1977, followed by New Hampshire and Vermont. In addition to its popularity among vacationers, New Hampshire attracts out-of-state customers because of its low rate of tax on alcoholic beverages and because it has no sales tax. The District of Columbia, New York, Connecticut, and New Jersey were substantial "importers" of retail trade (see Table 1).

Retail sales as a percentage of personal income increased in nine states between 1972 and 1977: Montana, North Dakota, Nevada, Idaho, South Dakota, Nebraska, Iowa, Hawaii, and Washington. Tourism was responsible for these gains with the exception of Washington, which has benefitted from the aircraft manufacturing boom following the deep slump of orders in the early 1970s.

Michigan had 136 inhabitants per retail trade establishment in 1977, compared with the national average of 114. Only the District of Columbia, Maryland, and Virginia ranked higher in this regard. As one might expect, generally speaking, the more densely populated states had more inhabitants per establishment, whereas the Plains states and Vermont, New Hampshire, and Maine had fewest. Because each place in Michigan serves more people, on the average, sales per establishment amounted to $476,000 here, compared with $390,000 nationally. Only Maryland, the District of Columbia, Alaska, and Nevada exceeded the Wolverine State in this regard.

In some kinds of businesses, small merchants are becoming scarce. Others, no doubt, are growing and incorporating, thereby moving up from the ranks of the small. Some, particularly gasoline service stations, are victims of high energy prices. Still others have been affected by changing American life-styles. Among those retail businesses that are growing most slowly are cigar stores and stands, bars and other drinking places, confectionery stores, and dairy products stores. Opportunity is to be found in such high growth retail industries as book stores, game and hobby shops, sporting goods stores, retail nurseries, gift and souvenir shops, and eating places. Another trend, evident in the data, is toward large size in some kinds of retailing. This is most apparent in the gains made by large department stores at the expense of small department and variety stores. Car dealers also are tending toward bigness and are declining in number.

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TABLE 1

Ranking of States According to Sales by Retail Trade Establishments as a Percentage of Personal Income: 1977

State	1972	1977	State	1972	1977
Montana	55.94	61.04	Kentucky	51.81	50.79
New Hampshire	62.51	60.21	Missouri	51.69	50.29
Vermont	61.21	59.45	Nebraska	48.13	49.60
North Dakota	47.64	58.77	Iowa	48.78	49.51
Nevada	57.76	58.66	Indiana	50.33	49.43
Maine	59.62	58.24	Hawaii	45.38	48.81
New Mexico	59.64	57.34	Washington	48.25	48.50
Idaho	56.68	56.86	Minnesota	49.51	48.08
Utah	56.56	55.38	Delaware	51.07	48.02
Florida	59.15	55.15	Wisconsin	48.25	47.46
Arizona	55.73	54.94	Kansas	47.22	47.12
Tennessee	56.56	54.38	Virginia	47.90	46.87
Oregon	54.83	54.35	Ohio	47.26	46.82
South Dakota	50.41	54.30	California	47.68	46.28
Arkansas	59.18	54.19	Michigan	47.50	45.93
Wyoming	54.18	53.81	Maryland	47.23	45.59
Louisiana	55.32	52.76	Pennsylvania	47.61	45.12
Georgia	55.49	52.12	Rhode Island	47.03	44.39
Colorado	54.20	52.01	Massachusetts	47.70	44.39
Texas	54.85	51.92	Illinois	45.54	43.41
Mississippi	56.14	51.56	Alaska	45.44	42.43
North Carolina	53.35	51.52	New Jersey	43.13	41.79
South Carolina	54.74	51.33	Connecticut	43.75	41.64
Alabama	54.50	51.20	New York	41.19	37.92
Oklahoma	54.65	51.11	Dist. of Columbia	43.66	33.95
West Virginia	51.35	51.04	United States	49.07	47.46

SOURCE: Developed from U. S. Bureau of the Census, *Census of Retail Trade, 1977, Geographic Area Series, United States* (Washington, D.C.: 1978), RC77-A-52, Table 4, and *Census of Retail Trade, 1972, Area Statistics, United States* (Washington, D.C.: 1975), RC72-A-52, Table 5; and Bureau of Economic Analysis, Regional Economics Information System.

ECONOMIC CENSUSES

Twice each decade, the Bureau of the Census mails questionnaires to all large manufacturers, retailers, wholesalers, builders, mining companies, and businesses that provide selected services. Data on small companies are developed from a sample of such establishments and from records of the Internal Revenue Service and the Social Security Administration. The retail trade category comprises establishments engaged in selling merchandise for personal use or household consumption and in rendering services incidental to the sale of those goods. Such establishments are further classified according to kind of business, reflecting commodity mix or convention. Drug stores, for example, are so classified if they sell prescription drugs, even though a majority of their receipts may be from the sale of cosmetics. Grocery stores, in contrast, derive most of their dollar volume from packaged foods. Since establishments are classified by kind of business, it is not possible to determine sales volumes for particular commodities.

Along with number of establishments and sales, the 1977 Census of Retail Trade has figures on payroll and employment. Paid employees include full- and part-time workers who were working or were on paid holiday, vacation, or sick leave during the pay period including 12 March 1977. Paid employment does not include proprietors and partners of unincorporated businesses.

KIND OF BUSINESS

Both in the nation and in Michigan, between 1972 and 1977, the number of eating places increased, and there were more such establishments in 1977 than any other kind of retail business. They accounted for 7 percent of retail sales in this state (7.7 percent nationally) and increased their share of the retail dollar during the five-year period. Michigan captures a less than proportionate share of restaurant dollars because of its greater emphasis on outdoor recreational activities. Also, many Michiganians spend restaurant dollars in other states, for example, during winter pilgrimages to Florida.

Gasoline service stations are not as numerous as restaurants, but they are responsible for a larger proportion of the retail sales dollar: 8.1 percent in Michigan and 7.8 percent nationally. Between 1972 and 1977, the number of service stations dipped sharply, but owing to higher gas prices, their share of the retail dollar increased.

There were fewer grocery stores in Michigan in 1977 than there were eating places or gasoline service stations, but they took in a larger share of retail receipts than these other two categories combined: 19.1 percent. Nationally, grocery stores received 20.4 percent of all retail dollars in 1977. Between 1972 and 1977, Michigan grocers experienced a sales gain of 39 percent, compared with 58 percent nationally. There is an element of fluke in the Michigan figures; Meijer Thrifty Acres is classified as a department store chain, but it takes food sales from grocery stores. Nevertheless, the statistic signals the change in buying habits engendered by a shift in the pattern of recreational travel. Before high gasoline prices, on hot summer weekends, Michigan highways were choked with station wagons and vans. Going to the lake or a cottage meant carrying groceries from home or buying provisions at the destination. In either case, Michigan packaged food merchants could count on a larger share of the recreational dollar than they can now. Another factor is the rising proportion of small householders, particularly childless couples and singles, who frequent restaurants.

The attachment of Michiganians to automobiles is borne out in the sales data for motor vehicle dealerships. During 1972, franchised vehicle dealers accounted for 17.9 percent of retail sales in Michigan, compared to 16 percent nationally. The 1977 figures were 19.7 percent and 16.9 percent, respectively. Our fondness for new cars is also apparent in data compiled by R. L. Polk and Company: Michigan is first in new car registrations per capita. This is true even though we rank 42 in per capita new imported car registrations. Additional evidence of vehicle affection is found in the most recent consumer expenditure survey published by the Bureau of Labor Statistics. It revealed that vehicle purchases accounted for 8.9 percent of a Detroit household's total expenditures, compared with 7.4 percent for urban households in the nation as a whole.[1]

Used car dealers do not fare well in Michigan. In much of the country, personal transportation is a necessity, regardless of income level. Many dealers in the rural South, for example, purchase used cars in the North, remove the rust, repair and paint them, and sell them to their neighbors. In states such as Michigan, the used car

market is depressed because high wages enable us to favor new cars. Also, prices of the new cars available here are below the national average.

Taverns and other places that serve alcoholic beverages capture a much higher percentage of the consumer dollar in Michigan than elsewhere. Michigan's package liquor stores, in contrast, are very much below average in this regard. Besides vying with bars and taverns, forbidden in many states, package stores here compete with liquor counters in grocery stores, also not permitted in some parts of the country, and with the state warehouses that supply them but that also sell to the general public. It seems appropriate to mention that cirrhosis of the liver is a more serious problem in Michigan than in the rest of the nation.

Buying from fresh produce stands and stores is exceptionally popular in Michigan (see Table 2). Garden supply stores also face a high level of demand here. Recreational boat dealers do well, having obvious advantages in the winter-water wonderland. Retailers of home furnishings and equipment other than furniture, clothing, sporting goods, toys, vehicles (other than used cars), and gasoline, along with hardware and department stores and vending machine operators, also experience higher levels of demand here than do their counterparts nationwide. At the other extreme are retail fuel dealers (who compete in a market dominated by relatively cheap and plentiful natural gas supplied by Michigan Consolidated and Consumers Power), mail order houses (which compete with several

(Continued on page 5)

TABLE 2
Comparative Michigan Retail Trade Statistics: 1972–1977

	Michigan sales as a percentage of U.S. sales		*Michigan, number of establishments*		*Michigan sales ($000,000)*		*Percentage increase in sales 1972–1977*		*Michigan, mid-March employment*	
Kind of business	*1972*	*1977*	*1972*	*1977*	*1972*	*1977*	*Michigan*	*U.S.*	*1972*	*1977*
Fruit & vegetable	6.0	9.8	411	361	36.9	96.8	155.2	56.5	641	1,469
Retail nurseries, lawn, & garden supply	7.3	6.2	252	547	60.2	110.8	84.0	115.6	1,152	1,756
Candy, nuts, & confectionery	4.8	6.0	540	409	28.5	34.1	17.2	– 7.0	1,616	1,190
Boats	n.a.	5.9	n.a.	311	n.a.	153.8	64.7[a]	61.1[a]	1,225	1,300
Drinking places	6.0	5.8	4,990	4,242	386.8	448.3	15.9	18.7	20,136	19,552
Household appliances	5.8	5.8	819	661	222.2	273.9	23.3	23.8	3,344	2,898
Hardware	5.7	5.7	1,327	1,316	226.5	347.8	53.6	53.8	4,918	5,855
Radio & television	n.a.	5.5	n.a.	965	n.a.	287.5	102.0[a]	71.1[a]	2,532	3,430
Women's ready-to-wear	5.3	5.4	1,116	1,410	449.2	672.1	49.6	47.2	14,569	16,251
Automatic merchandising machine ops.	5.3	5.3	568	617	160.0	208.4	30.3	31.1	3,452	3,377
Recreational & utility trailer	n.a.	5.3	n.a.	278	n.a.	154.7	92.8[a]	137.7[a]	702	1,035
Dealers, new & used vehicles	5.0	5.2	1,236	1,174	3,678.6	6,290.9	71.0	66.3	31,615	33,285
Men's and boys' clothing & furnishings	5.0	5.2	872	876	278.3	363.5	30.6	24.3	7,183	7,209
Department stores	4.9	5.1	346	319	2,494.1	3,885.6	55.8	50.6	60,042	68,180
Sporting goods & bicycles	5.8	5.1	1,215	1,545	146.8	237.4	61.8	83.4	2,631	3,377
Floor covering	n.a.	5.0	n.a.	711	n.a.	201.5	57.9[a]	65.2[a]	2,209	2,393
Drapery, curtain, & upholstery	n.a.	4.9	n.a.	420	n.a.	37.6	37.9[a]	35.4[a]	839	999
Hobby, toy, & games	4.3	4.9	512	835	38.7	86.4	123.3	94.8	727	1,822
Motorcycles	n.a.	4.8	n.a.	247	n.a.	94.6	– 3.1[a]	62.2[a]	1,276	1,158
Children's & infants' wear	n.a.	4.6	n.a.	182	n.a.	33.9	158.8[a]	74.0[a]	489	1,028
Gasoline service stations	4.4	4.6	8,919	6,572	1,481.6	2,590.9	74.9	67.8	33,524	30,309
Misc. food stores	n.a.	4.6	n.a.	500	n.a.	51.7	136.9[a]	108.3[a]	326	595
Retail bakeries	5.0	4.6	1,048	838	82.8	106.4	28.4	38.2	5,672	5,666
ITEM: PERSONAL INCOME	4.6[b]	4.6[b]	N.A.	N.A.	N.A.	N.A.	59.9[b]	62.5[b]	N.A.	N.A.
Drug stores	4.8	4.5	1,970	1,899	751.9	1,050.1	39.7	48.7	19,784	18,657
Misc. apparel & accessory	n.a.	4.5	n.a.	280	n.a.	32.7	232.8[a]	141.6[a]	360	873
Shoes	4.4	4.5	995	1,037	177.3	254.7	43.7	38.7	5,156	5,032
Books	4.2	4.4	286	457	38.0	81.2	113.4	102.8	1,173	1,565
Women's specialty & accessory, & furriers	3.7	4.4	350	256	34.7	44.8	29.0	7.2	1,130	965
Meat & seafood	3.8	4.3	490	554	107.0	161.0	50.5	34.5	2,003	2,481
Florists	4.3	4.2	878	1,023	69.0	100.2	45.2	49.6	2,896	3,467
ITEM: POPULATION	4.3[b]	4.2[b]	N.A.	N.A.	N.A.	N.A.	1.2[b]	3.9[b]	N.A.	N.A.
Direct selling estabs.	2.8	4.1	292	265	66.0	120.2	82.1	25.2	2,177	2,616
Grocery stores	4.7	4.1	6,634	5,993	4,393.8	6,110.9	39.1	58.3	60,809	58,974
Lumber & other building materials	n.a.	4.1	n.a.	1,166	n.a.	1,015.8	53.0[a]	81.0[a]	8,664	8,935
Misc. retail stores	n.a.	4.1	n.a.	4,034	n.a.	247.1	86.2[a]	75.8[a]	2,600	3,380
Camera & photographic supply	4.7	4.0	132	163	35.7	46.4	29.9	52.7	733	711
Eating places	4.0	4.0	8,998	9,594	1,223.1	2,247.7	83.8	82.9	97,154	142,198
Misc. automotive dealers	n.a.	4.0	n.a.	258	n.a.	31.4	–17.9[a]	9.3	370	248
Record shops & musical instruments	n.a.	4.0	n.a.	544	n.a.	113.6	45.7[a]	87.4[a]	2,019	2,072
Sewing, needlework, & piece goods	3.5	3.9	690	765	55.7	76.9	37.6	23.5	2,370	2,627
Auto & home supply	3.7	3.8	1,303	1,619	290.1	489.7	68.8	70.5	6,061	7,293

The MICHIGAN STATE ECONOMIC RECORD

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	42.5	42.0	40.0 (Jan.)
Average weekly hours, U.S.	40.1	40.9	39.8 (Jan.)
Average hourly earnings, Michigan ($)	363.89	380.77	361.88 (Jan.)
Average hourly earnings, U.S. ($)	260.25	285.07	277.01 (Jan.)
U.S. motor vehicle production (units)	1,254,814	791,521	795,383 (Mar.)
Michigan electricity usage (mil. kwh.)	6,616	5,762	6,069 (Jan.)
Industrial (mil. kwh.)	2,828	2,369	2,391 (Jan.)
Residential (mil. kwh.)	2,286	1,975	2,199 (Jan.)
Raw steel production:			
Michigan (000 net tons)	878	839	810 (Feb.)
United States (000 net tons)	10,562	10,701	10,332 (Feb.)
Consumer price index (1967 = 100)			
Detroit area	208.8	237.2	240.4 (Feb.)
United States	207.1	233.2	236.4 (Feb.)
U.S. wholesale price index (1967 = 100)	226.7	259.8	261.5 (Mar.)
Michigan farm prices received index (1967 = 100)	225	236	236 (Feb.)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, First 2 Months: 1979 and 1980

(Thousands of Dollars)

Area	Nonresidential			Residential			Total[a]		
	1979	1980	Percentage change	1979	1980	Percentage change	1979	1980	Percentage change
Ann Arbor	9,295	11,926	+ 28	3,150	6,343	+101	12,445	18,269	+ 47
Battle Creek	863	2,893	+235	3,042	894	− 71	3,905	3,787	− 3
Bay City	2,222	715	− 68	781	529	− 32	3,003	1,244	− 59
Detroit	147,025	112,664	− 23	129,624	82,354	− 36	276,649	195,018	− 30
Flint	8,518	14,230	+ 67	11,465	4,757	− 59	19,983	18,987	− 5
Grand Rapids	24,085	47,554	+ 97	21,989	18,378	− 16	46,074	65,932	+ 43
Jackson	7,701	3,963	− 49	1,233	886	− 28	8,934	4,849	− 46
Kalamazoo-Portage	1,253	2,125	+ 70	5,522	5,123	− 7	6,775	7,248	+ 7
Lansing–East Lansing	5,726	10,259	+ 79	11,334	14,244	+ 26	17,060	24,503	+ 44
Muskegon–Norton Shores–Muskegon Heights	1,435	656	− 54	2,095	2,652	+ 27	3,530	3,308	− 6
Saginaw	3,117	4,145	+ 33	2,884	4,603	+ 60	6,001	8,748	+ 46
Michigan	241,407	226,637	− 6	217,357	173,599	− 20	458,764	400,236	− 13
United States	7,190,300	7,986,600	+ 11	9,118,100	8,437,400	− 8	16,308,400	16,424,000	+ .7

SOURCE: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1979 and 1980 figures for nonbuilding construction contracts were $201,300,000 and $72,259,000 respectively, or a decrease of 64 percent. U. S. figures for nonbuilding construction contracts were $9,343,000,000 and $5,050,000,000, or a decrease of 46 percent.

TABLE 2 (Cont.)

Comparative Michigan Retail Trade Statistics: 1972–1977

Kind of business	Michigan sales as a percentage of U.S. sales		Michigan, number of establishments		Michigan sales ($000,000)		Percentage increase in sales 1972–1977		Michigan, mid-March employment	
	1972	1977	1972	1977	1972	1977	Michigan	U.S.	1972	1977
Furniture	3.7	3.8	1,179	1,221	382.8	529.5	38.3	34.6	7,919	7,515
Gift, novelty, & souvenirs	3.6	3.7	910	1,261	43.3	94.1	117.1	111.4	1,416	2,485
Jewelry	4.0	3.7	819	1,093	123.2	203.2	65.0	74.1	3,249	4,105
Cigar stores & stands	2.9	3.6	142	100	12.3	16.7	35.5	9.0	429	307
Variety stores	3.7	3.6	712	546	272.7	257.0	– 5.7	– 3.4	9,634	7,249
Bottled gas dealers	n.a.	3.4	n.a.	215	n.a.	102.9	117.9[a]	105.4[a]	1,177	1,230
Luggage & leather goods	4.4	3.3	58	80	8.7	12.1	39.0	85.1	279	293
Paint, glass, & wallpaper	n.a.	3.3	n.a.	396	n.a.	80.3	50.6[a]	54.3[a]	1,289	1,473
Misc. home furnishings	n.a.	3.3	n.a.	520	n.a.	47.5	62.3[a]	110.1[a]	728	1,030
Mobile home dealers	3.8	3.3	441	287	140.4	128.8	– 8.3	3.0	1,472	820
Used car dealers	3.0	3.1	1,009	1,083	136.7	217.5	59.2	53.5	1,033	1,109
Family clothing stores	2.5	3.0	565	608	122.8	240.1	95.5	63.5	3,838	5,639
News dealers & newsstands	n.a.	3.0	n.a.	309	n.a.	16.1	37.1[a]	9.4[a]	209	200
Stationery stores	2.8	3.0	171	171	21.2	33.9	60.2	48.4	825	782
Used merchandise	3.2	3.0	1,017	1,469	47.2	84.9	79.7	90.7	1,345	1,876
Dairy products	n.a.	2.6	n.a.	378	n.a.	32.2	– 6.3[a]	25.4[a]	1,044	886
Misc. general merchandise	2.4	2.4	559	507	162.6	238.5	46.7	49.2	3,958	3,750
Fuel oil dealers	n.a.	2.1	n.a.	264	n.a.	142.6	120.0[a]	123.1[a]	1,011	1,162
Liquor stores	1.9	2.1	775	941	189.8	278.2	46.6	31.3	2,578	3,210
Fuel & ice dealers	n.a.	2.0	n.a.	72	n.a.	5.2	–36.5[a]	– 5.0[a]	135	48
Mail order houses	2.0	2.0	231	295	90.0	143.5	59.4	65.2	1,998	2,102
Total retail trade	4.5	4.4	65,854	67,059	20,546.2	31,912.4	55.3	58.1	461,845	523,549

SOURCE: Developed from Bureau of the Census, *1977 Census of Retail Trade, Geographic Area Series, Michigan* (Washington, D.C.: 1979), RC77-A-23, Tables 1 and 2, *1972 Census of Retail Trade, Area Series, Michigan* (Washington, D.C.: 1974), RC72-A-23, Table 1 and similar documents for the United States; and Bureau of Economic Analysis, Regional Economics Information System.

N.A.: not applicable

n.a.: not available

a. Establishments with payroll only.

b. Michigan personal income and population, respectively, as a percentage of U.S.

RETAIL TRADE CENSUS

(Continued from page 3)

aggressive department store chains), dairy products stores, liquor stores, newsstands, family clothing stores, used merchandise stores, used car dealers, stationery stores, and mobile home dealers.

The bottom line for Michigan was a retail trade sector that grew at a rate somewhat below the national average between 1972 and 1977. The main deterrent to faster growth was grocery stores. Aside from these, retailing in Michigan grew slightly more rapidly than in the nation.

EMPLOYMENT

During the mid-March 1977 pay period, Michigan restaurants, lunchrooms, cafeterias, refreshment places, social caterers, contract feeding businesses, and ice cream and frozen custard stands had over 142,000 paid employees, or 27 percent of the retail trade total. Between 1972 and 1977, such establishments were responsible for 75 percent of the job gain in Michigan retail trade, although they accounted for only 9 percent of the increment in retail sales volume. This was possible because food service is very labor intensive; only retail bakeries are more so, no doubt because most of them make some of their merchandise on the premises, itself a labor-intensive activity. Florists, used merchandise stores, drinking places, and confectionery stores also pay a relatively high proportion of their receipts as wages. In Michigan, candy shops include those on Mackinac Island and in St. Ignace and Mackinac City, where fudge is made before audiences of tourists (or fudgies, as they are called locally). Least labor intensive are gasoline service stations, liquor stores, and dealerships in cars, fuel oil, mobile homes, recreational vehicles, utility trailers, and fuel and ice (see Table 3). In these kinds of business, relatively little is done by the retailer to the product.

Department stores, the second largest kind of retail business employer, had more than 68,000 employees in 1977, compared with 60,000 in 1972. Grocery stores, which ranked second in employment in 1972, dropped to third in 1977, employing 2,000 fewer people. Gas stations, car and boat dealers, drug stores, and women's clothing stores also employ a large number of people. Together, only eight of the sixty-one kinds of retail business accounted for 75 percent of all those employed in the Michigan retail trade sector.

At Michigan franchised motor vehicle dealerships selling both new and used cars, payroll per employee in 1977 averaged $14,624, or 22 percent above that in rug, carpeting, and linoleum stores, which were second in average pay. At exclusively domestic make new car dealerships (not shown separately in Table 3), the average Michigan salary level ($14,624) was considerably above the U.S. figure ($12,664). Among dealers with only imported new car franchises, the salary per employee in Michigan was slightly below the U.S. average ($13,416 versus

$13,802, not shown in Table 3). Imported car dealers are heavily concentrated on the two U.S. coasts, which are high wage areas, as is Michigan. As an aside, selling cars and trucks is among the occupations in which women and ethnic minorities are fewest.

In nearly all of the top paying retail businesses, average pay in Michigan is above the national figure. In most of the low paying kinds of retailing, average pay in this state is below the U.S. norm. On balance, Michigan retail workers earn more than the national average; they also are considerably more productive. Consequently, payroll is a lesser expense in Michigan than it is nationally, in most kinds of retail business as well as in retailing overall (see Table 3).

TABLE 3
Sales per Establishment, Payroll per Employee, and Sales per Employee in Retail Trade, Michigan and the United States: 1977

Kind of business	Sales per establishment ($000)		Sales per employee ($000)		Payroll per employee ($)		Payroll as a percentage of receipts	
	Michigan	United States	Michigan	United States	Michigan	United States	Michigan	United States
Fruit & vegetable	295.8	138.6	65.9	62.8	5,526	5,823	8.4	9.3
Retail nurseries, lawn, & garden supply	202.5	115.5	57.7	43.6	8,901	7,286	15.4	16.7
Candy, nuts, & confectionery	95.0	71.6	28.7	26.6	5,650	4,207	19.7	15.8
Boats	494.6	396.6	115.7	98.0	11,513	9,684	9.9	9.9
Drinking places	105.7	82.1	21.8	20.7	4,117	4,179	18.8	20.2
Household appliance	414.3	269.7	91.6	69.3	9,684	8,855	10.7	12.8
Hardware	264.3	230.1	56.2	50.9	7,357	7,200	13.1	14.2
Radio & television	297.9	212.8	80.5	68.5	9,551	8,880	11.9	13.0
Women's ready-to-wear	476.7	277.2	41.1	37.6	5,830	5,366	14.2	14.3
Automatic merchandising machine ops.	339.7	292.5	50.2	50.5	10,106	8,931	17.4	17.7
Recreational & utility trailer	556.3	553.1	136.7	137.4	11,132	10,260	8.1	7.5
Dealers, new & used motor vehicles	5,358.5	3,958.1	189.0	154.2	14,624	13,006	7.7	8.4
Men's & boys' clothing & furnishings	414.9	306.1	49.9	47.1	8,323	7,561	16.7	16.1
Department stores	12,180.6	8,732.8	57.0	46.8	8,328	6,535	14.6	14.0
Sporting goods & bicycles	153.6	147.7	62.9	54.2	8,001	6,924	12.7	12.8
Floor covering	283.3	234.5	79.7	69.7	11,931	10,283	15.0	14.7
Drapery, curtain, & upholstery	89.5	67.6	33.3	34.1	5,962	6,657	17.9	19.5
Hobby, toy, & games	103.5	95.4	42.3	46.1	4,844	5,326	11.4	11.5
Motorcycles	383.1	310.0	78.8	78.4	8,292	8,761	10.5	11.2
Children's & infants' wear	186.1	140.9	32.4	33.3	4,590	4,646	14.2	14.0
Gasoline service stations	394.2	320.0	82.8	79.9	5,323	5,694	6.4	7.1
Misc. food stores	103.5	98.8	52.9	45.9	5,230	5,594	9.9	12.2
Retail bakeries	126.9	115.5	16.8	16.4	4,634	4,782	27.6	29.1
Drug stores	553.0	468.0	56.0	50.2	7,298	6,804	13.0	13.6
Misc. apparel & accessory	116.9	78.7	34.6	35.0	6,416	5,879	18.5	16.8
Shoes	245.7	202.6	49.8	45.5	7,257	6,782	14.6	14.9
Books	177.6	144.7	49.3	40.3	5,914	5,447	12.0	13.5
Women's specialty & accessory, & furriers	175.0	116.8	44.6	39.7	6,724	5,958	15.1	15.0
Meat & seafood	290.6	224.3	60.8	62.0	6,773	6,937	11.1	11.2
Florists	98.0	81.7	26.2	24.8	5,671	5,288	21.7	21.3
Direct selling estabs.	453.8	351.2	46.0	33.2	8,366	6,885	18.2	20.7
Grocery stores	1,019.7	926.2	101.4	85.1	9,479	7,884	9.3	9.3
Lumber & other building materials	871.2	854.6	112.2	96.3	11,957	10,367	10.7	10.8
Misc. retail stores	61.3	60.9	46.4	40.9	8,663	7,882	18.7	19.3
Camera & photographic supply	284.5	206.4	62.4	65.6	7,703	7,910	12.3	12.1
Eating places	234.3	202.6	15.6	15.9	3,991	4,093	25.6	25.8
Misc. automotive dealers	121.9	130.1	94.6	86.4	7,940	8,325	8.4	9.6
Record shops & musical instruments	208.9	209.0	51.5	53.9	6,819	7,360	13.2	13.7
Sewing, needlework, & piece goods	100.2	102.7	27.0	29.8	3,663	4,160	13.6	14.0
Auto & home supply	302.5	273.9	64.5	60.3	10,006	9,384	15.5	15.6
Furniture	433.7	344.6	68.8	61.9	10,986	9,466	16.0	15.3
Gift, novelty, & souvenirs	74.6	75.6	32.8	32.6	5,001	4,836	15.2	14.8
Jewelry	186.0	159.2	46.4	47.7	7,913	7,945	17.0	16.7
Cigar stores & stands	166.8	126.8	48.2	51.5	4,739	5,509	9.9	10.7
Variety stores	470.7	408.3	34.9	32.4	5,177	4,680	14.8	14.4
Bottled gas dealers	478.6	410.5	82.8	74.4	9,947	9,411	12.0	12.7
Luggage & leather goods	151.7	144.3	39.9	41.9	6,488	6,603	16.2	15.7
Paint, glass, & wallpaper	202.7	206.0	52.7	57.8	9,206	8,886	17.5	15.4
Misc. home furnishings	91.4	110.1	37.9	41.5	6,177	6,597	16.3	15.9
Mobile home dealers	448.6	492.5	148.3	135.5	11,751	11,085	7.9	8.2

TABLE 3 (Cont.)

Sales per Establishment, Payroll per Employee, and Sales per Employee in Retail Trade, Michigan and the United States: 1977

Kind of business	Sales per establishment ($000)		Sales per employee ($000)		Payroll per employee ($)		Payroll as a percentage of receipts	
	Michigan	United States	Michigan	United States	Michigan	United States	Michigan	United States
Used car dealers	200.0	187.6	144.7	122.7	10,717	8,851	7.4	7.2
Family clothing stores	394.9	373.7	41.6	42.5	5,221	5,651	12.6	13.3
News dealers & newsstands	52.2	68.6	49.7	41.3	5,055	4,606	10.2	12.7
Stationery stores	198.1	174.3	41.8	38.6	7,023	6,393	16.8	16.6
Used merchandise	57.8	57.2	34.8	35.0	6,812	6,447	19.6	18.4
Dairy products	85.1	151.7	24.5	34.8	3,192	4,021	13.0	11.6
Misc. general merchandise	470.4	437.5	61.5	60.5	6,517	6,133	10.6	10.1
Fuel oil dealers	540.2	648.3	116.5	114.5	9,083	10,898	7.8	9.5
Liquor stores	295.6	292.4	80.6	83.8	5,441	6,277	6.8	7.5
Fuel & ice dealers	72.0	112.6	69.8	60.1	5,792	7,481	8.3	12.5
Mail order houses	486.6	689.5	66.6	58.9	6,632	8,797	10.0	14.9
Total	475.9	389.8	59.4	53.7	7,106	6,584	12.0	12.3

SOURCE: Developed from Bureau of the Census, *1977 Census of Retail Trade, Geographic Area Series, Michigan* (Washington, D.C.: 1976), RC77-A-23, Tables 1 and 2, *1972 Census of Retail Trade, Area Series, Michigan* (Washington, D.C.: 1974), RC72-A-23, Table 1, and similar documents for the United States.

SIZE

Department stores were by far the largest kind of retailer in this state in 1977, averaging about $12 million in sales. They were largest nationally, too, with $8.7 million. Between 1972 and 1977, the average size of Michigan department stores grew by 60 percent, compared with 32 percent in the United States. The number of department stores in this state declined by 8 percent, whereas there was a 14 percent increase nationwide. No doubt, being the home of three aggressive chains—K-Mart, Hudson's, and Meijer Thrifty Acres—has been a major factor in the performance of Michigan department stores. Variety stores did not fare well in the nation, particularly in Michigan. In general, those with paid employees in this state are dwindling more rapidly than those without. Similarly, the ranks of those that are incorporated are shrinking at a faster rate than those that are not. These sketchy indicators suggest that, between 1972 and 1977, smaller variety stores, although hurt, were not as seriously affected by the growth of department stores as were the larger variety stores. These latter are located in population centers where they compete with department stores, whereas "mom-and-pop" stores still find a favorable environment in small towns.

Franchised car dealers, second in retail size in 1977, are becoming fewer, both in Michigan and nationally. In average size, this state's dealers are larger and growing faster than their U.S. counterparts. The small franchise dealership is being squeezed out, more so in the Wolverine State than in the nation. The same is not true of used car dealers. Both here and elsewhere, there was a proliferation of small used car lots between 1972 and 1977, whereas the number of larger used car dealerships declined.

Among grocery stores, a distant third in average size, the Michigan market has been affected by the very rapid increase in the number of Meijer Thrifty Acres establishments, classified as department stores, but with food departments that rival large grocery chains. Essentially, the struggle for the packaged food dollar has been a battle among titans, with smaller grocers not unscathed, but not as hard hit as larger ones.

Among kinds of business that typically are small, there were both winners and losers between 1972 and 1977. The number of restaurants, liquor stores, women's and children's clothing stores, florists, jewelers, sporting goods stores, hobby shops, camera shops, and book stores increased. The number of retail bakeries, dairy products stores, candy shops, taverns, newsstands, and fuel and ice dealers declined. Changing tastes rather than competition from large retailers seem the more likely cause of these alterations in the structure of small retail business.

COUNTY RANKINGS

Kalkaska was far and away the leader in retail sales growth between 1972 and 1977, followed by Livingston and Crawford counties. These three, in that order, are the fastest growing in the state in population and income. In Baraga County, fourth in the ranking, and where population gains were not impressive, automobile dealerships and gasoline service stations were responsible for the sales spurt. Marquette County, ranked fifth, is the major Upper Peninsula growth center for trade and services and also is not experiencing unusual population growth. Keweenaw County (sixth) has the state's smallest economy. There are no drug stores, apparel stores, automotive dealers, furniture stores, or general merchandise stores, and only one hardware store, six gasoline service stations, eleven food stores, fourteen restaurants, and thirteen miscellaneous retail establishments. The very large percentage increase in retail sales in Keweenaw between 1972 and 1977 resulted from modest increases in the dollar volume of sales to visitors at food stores and in restaurants. Retailing in Montmorency, Oscoda, and Benzie counties was stimulated by population influx.

The number of inhabitants per retail establishment was greatest in the southern part of the state, near the population centers. Sales per establishment were highest in

Macomb, Genesee, Washtenaw, Oakland, and other counties with large urban areas. Keweenaw and Lake counties had the lowest levels of sales per establishment. Not only do large department stores such as K-Mart and Hudson's not locate in sparsely populated areas such as these, but also the small business is even smaller than elsewhere. The average restaurant in Keweenaw had sales of $50,000 during 1977, about 75 percent below the statewide average for this kind of business.

Because of its tiny economy, few retailers find it profitable to locate in Keweenaw, preferring nearby Houghton County. Since people in Keweenaw must go to Houghton or Hancock to purchase many items, the ratio of retail sales to personal income is very low in Keweenaw (see Table 4). Such commuting to market also explains the above average ratio of retail sales to personal income in Houghton County, the destination. There are similar patterns elsewhere. Cass, Barry, Clinton, and Leelanau residents are part of the markets for Berrien, Kent, Ingham, Eaton, and Grand Traverse merchants.

Emmet, Crawford, Wexford, Roscommon, Cheboygan, Ogemaw, Otsego, and several other northern Michigan counties have drawing power that extends far beyond their nearby neighbors because they contain the summer homes of residents farther south as well as attract tourists and other short-term visitors.

Wayne County posted a retail sales gain of only 35 percent, lowest in the state. When corrected for price changes, "real" retail sales in Wayne did not grow at all. Department store sales were exceedingly sluggish, gaining only 18 percent (undoubtedly a decline in real terms). Grocers fared less poorly, with a gain of 29 percent (also a real decline), perhaps partly because there were no Meijer Thrifty Acres in Wayne County in 1977. This also may be why hardware store sales grew more rapidly in Wayne than in Michigan or the nation. Almost every kind of retail business in Wayne County experienced slower than national or state rates of growth. Two exceptions were car dealerships and gasoline service stations, which were close to the national norm, indicating that many suburban residents still go to Detroit to buy cars and gasoline. This pattern is probably a by-product of commuting to work. It is likely that dealer competition is more fierce in Detroit than the suburbs, which makes prices more attractive to the consumer.

Other counties with low retail sales growth performance between 1972 and 1977 were Gogebic and Ontonagon, both in the generally depressed western U.P.; Chippewa, in the generally depressed eastern U.P.; Gratiot, suffering from several plant closures; Mason and Muskegon, generally depressed areas on the state's western shoreline; and Calhoun, also generally a depressed area.

TABLE 4
Ranking of Michigan Counties According to Sales by Retail Trade Establishments as a Percentage of Personal Income: 1977

County	*1972*	*1977*	*County*	*1972*	*1977*
Emmet	92.7	88.7	Marquette	44.8	50.4
Crawford	90.6	85.9	Alcona	56.2	49.7
Wexford	88.6	84.4	Saginaw	49.8	49.3
Roscommon	96.8	83.6	Genesee	51.0	49.3
Cheboygan	86.0	79.0	Ingham	52.6	48.9
Ogemaw	90.2	78.5	Muskegon	52.2	48.8
Otsego	86.7	76.3	Washtenaw	49.9	48.5
Grand Traverse	80.8	71.9	Macomb	46.0	48.0
Kalkaska	68.5	65.6	Menominee	45.7	47.7
Mecosta	63.8	64.9	Jackson	48.5	47.2
Clare	74.6	64.7	St. Joseph	48.4	47.2
Mackinac	70.2	63.3	Oakland	47.1	47.1
Alpena	72.1	62.3	Huron	51.5	46.9
Mason	67.1	61.8	St. Clair	49.5	46.5
Delta	65.9	61.5	Gratiot	50.4	45.5
Eaton	58.7	60.9	Branch	53.0	45.4
Baraga	47.7	60.8	Antrim	50.9	45.4
Schoolcraft	66.1	60.6	Missaukee	47.3	45.2
Montmorency	61.0	60.4	Shiawassee	42.6	44.0
Benzie	57.7	59.9	Calhoun	48.6	43.9
Iron	63.0	59.2	Van Buren	46.9	43.8
Dickinson	64.4	58.2	Osceola	46.7	43.7
Isabella	54.3	58.1	Oceana	49.6	42.6
Montcalm	61.7	57.6	Sanilac	44.0	42.4
Kent	58.1	56.9	Ottawa	41.8	42.1
Chippewa	59.6	56.1	Lake	41.6	41.7
Houghton	61.2	56.0	Newaygo	42.5	41.5
Gogebic	59.7	55.8	Allegan	46.0	40.9
Alger	55.6	55.4	Hillsdale	40.3	39.3
Iosco	57.8	54.3	Livingston	39.8	39.2
Arenac	66.3	54.2	Wayne	42.1	38.8
Gladwin	53.8	54.0	Lapeer	40.3	38.7
Ontonagon	53.2	53.9	Midland	43.6	38.6
Presque Isle	60.2	53.8	Monroe	36.6	37.3
Luce	51.1	53.2	Tuscola	41.9	37.1
Oscoda	52.1	53.0	Keweenaw	27.7	33.6
Lenawee	56.6	52.7	Leelanau	39.1	33.2
Berrien	49.3	52.4	Clinton	34.4	32.8
Ionia	49.0	52.2	Barry	31.3	29.8
Kalamazoo	51.7	52.1	Cass	30.2	28.5
Charlevoix	53.2	51.4	Michigan	47.5	45.9
Manistee	57.0	51.1	United States	49.1	47.5
Bay	55.9	50.6			

SOURCE: Developed from U. S. Bureau of the Census, *Census of Retail Trade, 1977, Geographic Area Series, Michigan* (Washington, D.C.: 1978), RC77-A-23, Table 7, and *Census of Retail Trade, 1972, Area Statistics, Michigan* (Washington, D.C.: 1974), RC72-A-23, Table 6; and Bureau of Economic Analysis, Regional Economics Information System.

CITATION

1. Bureau of Labor Statistics, *Consumer Expenditure Survey: Interview Diary and Interview Survey Data, 1972-73*, Bulletin 1992 (Washington, D.C.: 1978), Tables 11 and 13.

THE MICHIGAN STATE ECONOMIC RECORD
DIVISION OF RESEARCH
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
MICHIGAN STATE UNIVERSITY
BERKEY HALL
EAST LANSING, MICHIGAN 48824

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THE

MICHIGAN STATE ECONOMIC RECORD

(ISSN: 0026-2455)

A MONTHLY REPORT ON BUSINESS CONDITIONS IN MICHIGAN

Volume 22 No. 5

MAY 1980

Published by the Division of Research Graduate School of Business Administration Berkey Hall

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Michigan State University

EAST LANSING MICHIGAN 48824

Published monthly, except July and August, when bimonthly. Second class postage paid at East Lansing, Michigan. Distributed on request to residents of the State of Michigan. Permission to reprint granted upon written request.

COUNTY INCOME UPDATE

by DAVID I. VERWAY, *Research Professor, Division of Research, Graduate School of Business Administration, Michigan State University*

Between 1977 and 1978, earnings in Missaukee County increased by 33 percent, more rapidly than in any other county in Michigan. Oceana and Leelanau were second and third. These three counties benefited from heavy dependence on agriculture, the state's fastest growth sector in 1978. Missaukee's economy is nearly one-third agricultural, Oceana's one-quarter, and Leelanau's more than one-fifth. Huron is the other Michigan county that relies on agriculture for over 20 percent of earnings. Missaukee County farming centers on dairying. Oceana is the nation's asparagus capital and a major producer of tart cherries and apples. Leelanau specializes in tart and sweet cherries. Huron County is the nation's navy bean capital. Agriculture was also the major underlying factor in the high level of growth in Clinton, Ionia, and Van Buren counties, 12 percent, 9 percent, and 10 percent dependent on farming, respectively. Dairying is important in Clinton and Ionia counties, apples and cherries in Van Buren. Although farming is a major element in the Thumb and Little Finger of the state and in a few other areas, it accounted for just over one percent of the Michigan earnings total and for 2.5 percent of the nation's. These data pertain to farming per se, exclusive of the manufacture and distribution of implements, chemicals, and so forth, and of food processing and distribution. These figures have just been released by the Bureau of Economic Analysis (BEA) in Washington, D.C., part of the U. S. Department of Commerce.

BEA county earnings estimates are developed from reports that employers file with state employment agencies and from tax returns filed with the Internal Revenue Service. Total earnings are comprised of labor income and the net incomes of nonincorporated business enterprise, such as proprietary motels, restaurants, and grocery stores, as well as the business of professionals, such as physicians, dentists, lawyers, and trade contractors. These data are the best available yardsticks of economic activity taking place in counties, although they are not as comprehensive as gross national product accounts for the United States. Michigan counties are ranked in Table 1 on the basis of earnings growth rates between 1977 and 1978.

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Montmorency farmers also experienced prosperity during 1978, but farming is responsible for less than 3 percent of earnings there. This small economy is relatively well diversified, with manufacturing the leading sector, retail trade second. Montmorency ranked fifth in 1978 in percentage of earnings derived from retail trade. Merchants depend on summer residents who own or rent cottages, cabins, and the like. Manufacturing does not have the predominance in Montmorency that it has in Michigan's southern regions, accounting for only 35 percent of total earnings during 1978, compared with 44 percent statewide. Nevertheless, earnings in manufacturing gained by 38 percent in Montmorency between 1977 and 1978 (fourth highest in the state), and by 26 percent in retailing (third highest). Since the county's services sector is tiny, the statewide growth in that category was little affected by Montmorency's disappointing performance. The broad services category includes lodgings, amusements, and professional, business, repair, and personal services.

In Antrim County, fifth in earnings growth between 1977 and 1978, about 8.5 percent of earnings was derived from agriculture (principally cherries); this sector enjoyed a 168 percent increase. Services, which accounted for over 12 percent of earnings, grew by 40 percent. Antrim is relatively well endowed with seasonal housing as well as overnight accommodations. The popular Shanty Creek Lodge is located two miles south of Bellaire, and Schuss Mountain lies four miles west of Mancelona.

Grand Traverse enjoyed a spectacular increase in agricultural earnings, but this sector accounted for only 3 percent of the total. Manufacturing, services, and retail trade were the engines of growth here. The lodgings industry attracts conventions as well as tourists. Finance, insurance, and real estate are small but rapidly growing, as Traverse City is the financial distribution center of northern Michigan.

One county was responsible for 70 percent of the earnings increase in mining between 1977 and 1978. In Marquette County, Cleveland Cliffs expanded its mining operations. Low grade iron ore is enriched in taconite plants before shipment to steel centers in Indiana, Illinois, and Ohio. Miners' earnings in Marquette County rose by 43 percent. In 1978, 37 percent of the state's mining activity took place there, compared with 30 percent in 1977. Outside Marquette County, earnings from mining grew by a mere 8.5 percent.

Allegan was propelled by its agricultural and manufacturing sectors. This county ranks tenth in the relative importance of farming and matches the statewide average in dependence on manufacturing.

Ottawa owes its above average growth primarily to construction, but also to services. Finance, insurance, and real estate; retail trade; manufacturing; and agriculture posted earnings gains above state and national averages. The spectacular construction boom (a 65 percent jump in earnings, compared with 21 percent statewide) bodes future economic growth generally, since many of the new structures are factories, stores, and offices. Nearby Kent County also is experiencing a major expansion of its economic base, larger in sheer size than Ottawa's, but smaller in a relative sense because its economy is so much larger. The construction sector in Kent grew by 26 percent. Grand Rapids is the major business center for western Michigan and one of the stellar performers in terms of growth potential among the nation's cities in its population size class.

Other counties with outsized increases in the construction industries are Charlevoix (52 percent), Missaukee (48 percent), Clare (44 percent), Ingham (42 percent), Lapeer (38 percent), Muskegon (37 percent), Isabella (36 percent), St. Clair (33 percent), Otsego (32 percent),

TABLE 1

Ranking of Michigan Counties According to Growth in Labor and Proprietors' Earnings, by County in Which Earned: 1977–1978

County	Percentage change 1973-1978	Percentage change 1977-1978	County	Percentage change 1973-1978	Percentage change 1977-1978
Missaukee	54	33	Dickinson	80	14
Oceana	71	25	Jackson	47	14
Leelanau	52	25	St. Clair	58	14
Montmorency	68	24	Mackinac	70	13
Antrim	59	23	Ingham	62	13
Huron	44	22	Oscoda	70	13
Clinton	51	20	Muskegon	54	13
Ionia	64	20	Tuscola	50	13
Grand Traverse	88	20	Kalamazoo	66	12
Marquette	77	20	Saginaw	63	12
Allegan	57	20	St. Joseph	44	12
Van Buren	46	19	Wexford	64	12
Ottawa	75	19	Alger	56	12
Cass	57	18	Eaton	51	12
Washtenaw	81	18	Montcalm	56	12
Benzie	63	18	Genesee	71	11
Baraga	60	18	Kalkaska	225	11
Sanilac	48	18	Roscommon	73	11
Livingston	85	18	Wayne	42	11
Clare	68	17	Midland	83	10
Charlevoix	75	17	Houghton	58	10
Isabella	66	17	Calhoun	51	10
Kent	62	17	Berrien	38	10
Cheboygan	61	16	Alcona	53	10
Menominee	65	16	Gogebic	33	9
Macomb	67	16	Bay	56	9
Ogemaw	76	16	Monroe	51	9
Manistee	83	16	Schoolcraft	66	9
Oakland	79	16	Luce	69	9
Otsego	99	16	Delta	56	9
Alpena	60	16	Iosco	38	9
Mecosta	57	15	Crawford	83	8
Mason	55	15	Lake	9	8
Presque Isle	62	15	Gratiot	42	8
Gladwin	51	15	Iron	57	8
Lapeer	65	15	Lenawee	33	7
Barry	51	15	Shiawassee	40	7
Newaygo	70	15	Ontonagon	−5	5
Keweenaw	35	14	Arenac	66	2
Branch	67	14	Chippewa	22	−4
Emmet	61	14			
Hillsdale	54	14	Michigan	56	13
Osceola	31	14	United States	58	13

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.

and Baraga (31 percent). In terms of construction earnings as a percentage of total earnings, none of the counties ranked in the top ten, except St. Clair, shared in the rapid growth of the construction industry in this state between 1977 and 1978. In the case of Midland, Kalkaska, Alcona, Cheboygan, and Chippewa, this is because of construction booms that began before 1977, thus making the comparison between 1977 and 1978 less dramatic.

Michigan manufacturing grew relatively slowly between 1977 and 1978, both in comparison with the nation as a whole and with other sectors of this state's economy.

(Continued on page 6)

TABLE 2

Michigan Counties Most and Least Dependent on Manufacturing, Services, and Retail Trade in Their Economic Base: 1978

Manufacturing			Services			Retail trade			Retail trade and services		
County	Dependency[a]	Growth 1977–1978[b]	County	Dependency[a]	Growth 1977–1978[b]	County	Dependency[a]	Growth 1977–1978[b]	County	Dependency[a]	Growth 1977–1978[b]
Ten Most Dependent											
Genesee	60.43	8	Emmet	29.17	10	Clare	22.49	12	Emmet	45.97	13
Saginaw	55.65	14	Leelanau	23.00	12	Roscommon	22.36	7	Crawford	38.58	11
St. Joseph	55.08	13	Crawford	22.83	14	Cheboygan	18.79	6	Clare	37.77	13
Macomb	55.07	13	Oakland	20.59	17	Lake	17.94	12	Gd. Traverse	36.18	20
Midland	54.49	5	Gd. Traverse	20.59	19	Montmorency	17.78	26	Lake	35.71	0
Lenawee	49.35	8	Lake	17.77	−10	Arenac	17.69	17	Leelanau	34.82	15
Manistee	49.26	16	Benzie	17.42	21	Missaukee	17.52	26	Cheboygan	33.26	12
Berrien	48.82	8	Mackinac	16.68	22	Gladwin	17.10	15	Gogebic	33.00[c]	n.a.
Wayne	48.04	12	Wexford	16.30	10	Emmet	16.80	17	Roscommon	32.44	9
Ottawa	48.01	16	Kalamazoo	15.74	17	Schoolcraft	16.42	9	Mackinac	31.85	16
Five Least Dependent											
Presque Isle	3.02	20	Kalkaska	4.98	24	Midland	5.38	15	Luce	10.00[c]	n.a.
Marquette	3.14	6	Ontonagon	4.54	30	Washtenaw	6.43	12	Ontonagon	11.84	n.a.
Mackinac	3.88	22	Montmorency	4.93	8	Genesee	6.74	10	Presque Isle	13.00[c]	n.a.
Chippewa	4.37	11	Presque Isle	5.00[c]	n.a.	Ontonagon	7.30	n.a.	St. Joseph	14.50	15
Luce	4.69	−9	St. Joseph	6.42	13	Wayne	7.36	3	Menominee	14.69	15
Michigan	43.64	12	Michigan	13.72	14	Michigan	8.78	11	Michigan	22.50	13
U.S.	26.22	13	U.S.	16.30	14	U. S.	9.99	12	U.S.	26.29	13

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.
a. Earnings in this sector as a percentage of total labor and proprietors' earnings.
b. Percentage change in labor and proprietors' earnings in this sector.
c. Estimated by the author.
n.a.: not available.

TABLE 3

Michigan Counties Most and Least Dependent on Transportation, Communication, and Public Utilities; Wholesale Trade; Contract Construction; and Finance, Insurance, and Real Estate in Their Economic Base: 1978

Transportation, communication, and public utilities			Wholesale trade			Contract construction			Finance, insurance, and real estate		
County	Dependency[a]	Growth 1977–1978[b]	County	Dependency[a]	Growth 1977–1978[b]	County	Dependency[a]	Growth 1977–1978[b]	County	Dependency[a]	Growth 1977–1978[b]
Five Most Dependent											
St. Clair	13.84	11	Dickinson	10.29	15	Midland	18.83	16	Livingston	7.43	25
Jackson	13.09	n.a.	Oakland	8.38	28	Kalkaska	18.76	7	Lake	6.73	9
Chippewa	11.84	8	Kent	8.14	19	Alcona	15.40	n.a.	Houghton	6.71	5
Monroe	11.12	29	Tuscola	7.87	17	Cheboygan	13.03	24	Oakland	6.07	22
Shiawassee	10.48	8	Menominee	7.66	45	Montmorency	11.78	11	Roscommon	5.90	19
Five Least Dependent											
Montmorency	1.30	27	Midland	.53	18	Ontonagon	1.60[c]	n.a.	Alcona	.20[c]	n.a.
Leelanau	1.34	13	Alcona	1.00[c]	n.a.	Luce	2.17	5	Kalkaska	.50[c]	n.a.
Antrim	1.49	14	Ontonagon	1.10[c]	n.a.	Arenac	2.71	7	Keweenaw	.90[c]	n.a.
Osceola	1.56	16	Alger	1.16	10	Lenawee	2.76	21	Baraga	1.30[c]	n.a.
Oscoda	1.66	19	Benzie	1.36	10	Schoolcraft	2.96	0	Hillsdale	1.90[c]	n.a.
Michigan	5.47	15	Michigan	5.01	14	Michigan	4.85	21	Michigan	3.81	14
U.S.	7.64	14	U.S.	6.55	13	U.S.	6.06	16	U.S.	5.78	15

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.
a. Earnings in this sector as a percentage of total labor and proprietors' earnings.
b. Percentage change in labor and proprietors' earnings in this sector.
c. Estimated by the author.
n.a.: not available.

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	43.0	39.9	40.3 (Mar.)
Average weekly hours, U.S.	40.6	39.7	39.8 (Mar.)
Average hourly earnings, Michigan ($)	8.67	9.13	9.31 (Mar.)
Average hourly earnings, U.S. ($)	6.56	6.99	7.05 (Mar.)
U.S. motor vehicle production (units)	991,847	795,383	709,650 (Apr.)
Michigan electricity usage (mil. kwh.)	6,616	5,762	6,069 (Jan.)
Industrial (mil. kwh.)	2,828	2,369	3,391 (Jan.)
Residential (mil. kwh.)	2,286	1,975	2,199 (Jan.)
Raw steel production:			
Michigan (000 net tons)	1,044	810	828 (Mar.)
United States (000 net tons)	12,576	10,332	11,439 (Mar.)
Consumer price index (1967 = 100)			
Detroit area	211.6	240.4	242.9 (Mar.)
United States	209.1	236.4	239.8 (Mar.)
U.S. wholesale price index (1967 = 100)	226.7	259.8	261.5 (Mar.)
Michigan farm prices received index (1967 = 100)	227	236	236 (Mar.)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, First 3 Months: 1979 and 1980

(Thousands of Dollars)

Area	Nonresidential			Residential			Total[a]		
	1979	1980	Percentage change	1979	1980	Percentage change	1979	1980	Percentage change
Ann Arbor	17,185	38,428	+100	9,303	8,112	− 13	26,488	46,540	+ 76
Battle Creek	3,387	3,303	− 2	4,751	1,742	− 63	8,138	5,045	− 38
Bay City	2,552	826	− 68	1,742	5,489	+100	4,294	6,315	+ 47
Detroit	265,630	180,436	− 32	223,226	145,555	− 35	488,856	325,991	− 33
Flint	14,339	22,557	+ 57	17,894	6,632	− 63	32,233	29,189	− 9
Grand Rapids	47,941	63,052	+ 32	42,359	28,857	− 32	90,300	91,909	+ 2
Jackson	11,918	4,665	− 61	2,684	2,188	− 18	14,602	6,853	− 53
Kalamazoo–Portage	6,563	7,099	+ 8	10,473	8,266	− 21	17,036	15,365	− 10
Lansing–East Lansing	28,102	27,677	− 2	20,469	18,235	− 11	48,571	45,912	− 5
Muskegon–Norton Shores–Muskegon Heights	1,951	1,009	− 48	4,664	4,112	− 12	6,615	5,121	− 23
Saginaw	3,119	5,567	+ 74	5,823	5,794	− 1	9,022	11,361	+ 26
Michigan	450,836	380,088	− 16	397,767	284,146	− 29	276,947	168,782	− 39
United States	11,361,700	12,159,900	+ 7	16,111,000	13,003,000	− 43	27,472,700	25,162,900	− 8

SOURCE: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1979 and 1980 figures for nonbuilding construction contracts were $276,947,000 and $168,782,000 respectively, or a decrease of 39 percent. U. S. figures for nonbuilding construction contracts were $13,163,000,000 and $7,454,000,000 or a decrease of 43 percent.

Year-to-Year Change in Selected Economic Indicators

Indicator	First quarter 1979	Percentage change from previous year: 1979 April	May	June	July	August	September	October	November	December	1980 January	February	March
Civilian employment													
United States	3.8	2.7	2.5	2.2	2.8	2.2	2.7	2.1	2.0	2.2	1.8	1.6	1.1
Michigan	2.2	– .1	3.2	2.9	3.5	3.1	1.6	1.6	1.6	– .7	– 2.1	– 3.1	– 4.3
Detroit area[a]	1.3	– .9	3.1	2.7	3.0	2.3	1.1	.8	.7	– 1.3	– 3.7	– 4.6	– 5.6
Outstate[b]	3.0	.6	3.2	3.0	3.9	3.9	2.1	2.4	2.5	0	– .6	– 1.8	– 3.1
Wage and salary jobs[c]													
United States	4.6	3.6	3.7	3.5	3.5	3.2	3.1	2.9	2.7	2.4	2.5	2.3	1.8
Michigan	3.3	1.1	1.6	1.4	.9	– .3	– 1.0	– 1.1	– 1.7	– 2.3	– 2.9	– 3.4	– 3.7
Detroit area[a]	2.4	– .2	.9	.5	–	– 1.8	– 2.3	– 2.5	– 3.2	– 3.2	– 3.8	– 4.7	– 4.8
Outstate[b]	4.1	2.5	2.4	2.3	1.9	1.3	.4	.2	– .2	– 1.5	– 2.0	– 2.2	– 2.7
Average workweek[d]													
United States	1.4	– 3.7	– .7	– .7	– .7	– 1.0	– 1.2	– 1.0	– 1.7	– 1.0	– .7	– 1.9	– 2.0
Michigan	2.1	–12.9	– .9	– 2.6	– 4.2	– 4.7	– 6.5	– 8.1	–10.1	– 9.4	– 5.9	– 7.0	– 6.3
Average weekly earnings[e]													
United States	10.5	4.3	8.4	8.2	7.8	7.2	6.8	6.8	5.5	6.3	6.4	5.9	5.4
Michigan	12.4	– 6.0	8.8	5.7	4.4	2.5	– 3.9	– 1.9	– 6.3	– 4.7	– .3	– 1.6	.6
Motor vehicle assembly													
United States	9.7	–16.8	1.9	– 7.6	– 6.2	–28.8	–22.4	–20.1	–31.8	–33.5	–38.2	–33.9	–36.6
Michigan	14.5	–17.9	– 1.3	– 5.1	–13.3	–30.6	–27.8	–46.8	–29.8	–41.1	–	–	–
General Motors	20.4	– 5.2	10.5	– .4	–14.2	–14.9	–24.2	–52.4	–17.8	–27.6			
Ford	19.4	– 7.5	– 8.0	–12.0	18.2	–28.9	–17.8	–18.2	–28.3	–51.4			
Chrysler	– 8.0	–61.1	–24.2	–12.9	–41.6	–76.2	–53.6	–62.4	–64.8	–69.1			
Steel tonnage poured													
United States	10.4	5.8	3.8	3.1	3.8	– 2.1	– 8.1	–10.7	–14.2	–15.4	– 3.6	– 2.2	– 9.0
Michigan	20.6	22.4	13.7	7.8	– 1.0	.2	–13.8	–20.5	–18.2	–18.9	–16.3	– 7.8	–20.7
Commercial electricity consumption													
United States	5.3	6.7	6.7	1.0	– .2	.5	– .6	1.0	2.2	.8	– 2.1		
Michigan	6.1	6.1	8.7	3.0	3.5	1.0	– 5.2	1.0	3.5	2.3	– 2.7		
Industrial electricity consumption													
United States	8.8	8.9	5.7	3.5	3.8	2.4	– .1	.3	.1	– .7	– 1.0		
Michigan	10.9	– 2.1	3.5	1.7	.5	– 6.3	– 7.6	–10.1	–11.2	–13.2	–16.0		
Nonresidential construction contracts													
United States	28	23	1	22	1	10	– 6	14	– 6	18	10	12	3
Michigan	62	30	35	162	–17	2	–	– 5	28	– 8	28	–33	–24
Residential construction contracts													
United States	13	–13	4	– 8	3	– 2	4	– 3	–21	– 9	– 9	– 5	–34
Michigan	8	– 3	15	7	–10	24	– 6	–25	–24	–28	–27	–13	–37
Nonbuilding construction contracts													
United States	24	81	–32	19	– 9	–40	–11	–41	7	19	–20	–60	–36
Michigan	–50	55	– 3	–17	–67	–79	–82	28	–70	–71	–76	–49	28
Retail sales													
United States	13.5	10.3	9.1	7.3	8.1	12.3	9.4	11.3	11.3	8.1	12.3		
Michigan	17.0	11.2	9.5	7.2	7.8	6.4	3.0	5.4	6.4	4.6			
Detroit area[a]	18.7	14.0	9.5	9.2	11.1	5.6	1.7	1.6	4.9	3.3			
Detroit city	8.6	4.2	4.2	1.3	6.1	1.0	– 3.6	– 5.8	– 1.3	– 3.1			
Suburbs	21.0	16.2	10.8	10.9	12.2	6.6	2.8	3.1	6.2	3.3			
Outstate[b]	15.1	7.8	9.3	4.8	4.2	7.3	4.5	10.1	8.0	5.8			
Consumer price index													
United States	9.8	10.4	10.8	10.9	11.3	11.8	12.1	12.2	12.6	13.3	13.9	14.1	14.7
Detroit	11.9	12.1	11.2	10.7	12.8	13.5	13.2	13.1	14.5	15.3	15.7	15.1	14.8

SOURCE: Michigan Employment Security Commission, special release; Bureau of Labor Statistics, *The Employment Situation* (monthly); Motor Vehicle Manufacturers Association, special release; American Iron and Steel Institute, special release; Energy Information Administration, special release; F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases (monthly); and Bureau of the Census, *Monthly Retail Trade*.

a. Wayne, Oakland, Macomb, Livingston, Lapeer, and St. Clair counties.
2. Michigan minus Detroit area.
c. The number of wage and salary jobs, except agricultural, reported by employers.
d. Average hours worked by manufacturing production workers.
e. Average earnings among manufacturing production workers.

COUNTY INCOME UPDATE

(Continued from page 3)

Genesee County, where manufacturing generated 60 percent of total earnings, grew even more slowly than the state in this regard. Flint is the home of the Buick Division of General Motors Corporation, which also operates a light truck plant and other factories there. Midland County, home of Dow Chemical and Dow Corning, depends on manufacturing for over one-half of total earnings. It also experienced a lackluster performance in its manufacturing sector. In a few counties where it is relatively unimportant, manufacturing activity grew rapidly. The top five in such growth are Houghton (earnings in manufacturing up 49 percent between 1977 and 1978), Missaukee (up 43 percent), Huron (up 39 percent), Montmorency (up 38 percent), and Clare (up 34 percent). Factory earnings declined in Keweenaw, Arenac, Luce, Crawford, and Montcalm counties.

Chippewa County alone suffered a decline in total earnings between 1977 and 1978, a result of the Kincheloe Air Force Base closing. Earnings in Arenac and Ontonagon counties just inched ahead during 1978. Arenac has a depressed durable goods manufacturing sector; Ontonagon shared in the depressed national market for copper. Ontonagon's largest employer, Copper Range Mining Company, normally accounts for about two-thirds of total county earnings; during 1973 it generated less than one-half.

RESIDENCE ADJUSTMENT

The numbers in Tables 1 through 3 focus on economic activity taking place within counties, regardless of where the earnings recipients live. To calculate income received by persons, by county, the BEA has developed residence adjustments. For example, in 1978, residents of other counties earned $16,656,000 more in Ontonagon than Ontonagon residents earned elsewhere (see Table 4). That figure constitutes more than one-third of total earnings generated in the county. Others exporting a large percentage of earnings or, what amounts to the same thing, importing a large percentage of labor, are Ingham, Washtenaw, and Midland. Although Wayne ranks fifth in the proportion of earnings going to outside residents, it has by far the largest sheer dollar volume.

In the sheer dollar volume of earnings imported, or labor exported, Oakland is first and Macomb second, although in the percentage ranking they are 30 and 20, respectively. These figures merely illustrate what is common knowledge—the dependence of Oakland and Macomb residents on Wayne County jobs is not inconsequential. In a relative sense, the greatest such dependence in this state is Clinton's reliance on Ingham.

PROPERTY INCOME AND TRANSFER PAYMENTS

Total personal income is the sum of earnings received and income that entails no labor in return. The latter has two components: property income and transfer payments. Property income is received as dividends, interest, and

TABLE 4

Michigan Counties Most and Least Affected by Intercounty Commuting to Work: 1978

(Dollar figures in thousands)

County	*Labor and proprietors' earnings, by county in which received*	*Residence adjustment*	*Labor and proprietors' earnings, by county in which earned*	*Percentage*[a]
		Bottom 10		
Ontonagon	48,540	− 16,656	31,884	−34.3
Ingham	2,467,000	−665,178	1,801,822	−27.0
Washtenaw	2,344,501	−500,756	1,843,745	−21.4
Midland	568,973	−110,766	458,207	−19.5
Wayne	20,048,469	−2,836,079	17,212,390	−14.1
Wexford	107,853	− 13,141	94,712	−12.2
Grand Traverse	308,391	− 36,096	272,295	−11.7
Genesee	3,695,224	−417,051	3,278,173	−11.3
Kent	2,980,097	−323,357	2,656,740	−10.9
Saginaw	1,646,642	−146,226	1,500,416	− 8.9
		Top 10		
Clinton	108,881	218,204	327,085	66.7
Livingston	231,468	332,046	563,514	53.9
Shiawassee	207,178	203,772	410,950	49.6
Lapeer	205,288	181,475	386,763	46.9
Eaton	173,613	334,810	508,423	46.2
Gladwin	35,243	29,575	64,818	45.6
Monroe	440,480	369,696	810,176	45.6
Leelanau	32,085	24,919	57,004	43.7
Barry	119,334	85,915	205,249	41.9
Cass	158,521	102,849	261,370	59.3
Michigan	59,762,335	405,124	60,167,459	.7
United States	1,249,594,000	−411,000	1,249,183,000	0

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.
a. Residence adjustment as percentage of labor and proprietors' earnings received (where positive) or generated (where negative).

rent by the owners of capital. The nine Michigan counties that outrank the others in percentage of personal income derived from property, or capital, ownership are all located in the northern Lower Peninsula (see Table 5). It is to these counties that many workers retire when they leave Genesee, Wayne, Macomb, and the other industrial centers. They insulate their summer cottages for year-round occupancy.

Transfer payments include Social Security and other pensions, welfare benefits, unemployment compensation, and other income not linked to current production or to capital ownership. During 1978, Social Security (federal, old age, survivors, and disability insurance) payments in Michigan accounted for 43 percent of total transfer payments; welfare, 14 percent; Medicare, 12 percent; military retirement and veterans' benefits, 6 percent; unemployment benefits, 6 percent; and other items, 19 percent.

Lake County is more heavily dependent on transfer payments than any other Michigan county (see Table 6). It ranks first in welfare benefits as a percentage of personal income (4 percent), and second in Social Security benefits as a percentage of personal income (18.1 percent). The rankings in Table 6 reflect Social Security benefits more than anything else, because they are the major component of transfer payments. Northern Michigan counties rank high in this table for the same reason that they are located at the top of the list in Table 5.

PERSONAL INCOME

The sum of earnings received, property income, and transfer payments is a broad yardstick of the income available to persons. Per capita personal income indicates how counties fare, on the average, in the acquisition of slices of the national "pie." Oakland County does exceptionally well in this regard because it has high paying industry and because well-paid workers with jobs elsewhere reside there. Macomb ranks second in Michigan for much the same reason. Michigan's other counties with heavy dependence on manufacturing also rank high in per capita income because the majority of those jobs are high paying.

Most northern Michigan counties in the Lower Peninsula have low per capita incomes because a high proportion of their residents are retirees living on accumulated wealth and pensions. Also, the retail and service indus-

TABLE 5
Michigan Counties Most and Least Dependent on Property Income in Total Personal Income: 1978

County	*Per capita*	*Percentage*
Bottom 10		
Luce	$ 565	8.8
Genesee	825	9.2
Wayne	857	9.3
Macomb	893	9.5
Marquette	644	9.5
Lapeer	693	9.6
Shiawassee	749	10.0
Ingham	862	10.1
Clinton	748	10.2
Muskegon	706	10.2
Top 20		
Roscommon	$1,355	26.0
Leelanau	1,535	22.5
Montmorency	1,215	22.1
Alcona	1,131	22.0
Oscoda	878	20.2
Benzie	1,217	19.6
Emmet	1,391	19.5
Antrim	1,166	18.6
Lake	893	18.6
Crawford	1,006	18.4
Huron	1,273	18.0
Ogemaw	828	17.4
Cheboygan	990	16.9
Houghton	878	16.6
Keweenaw	907	16.5
Sanilac	1,022	16.0
Otsego	1,021	15.4
Missaukee	750	15.4
Grand Traverse	1,230	15.4
Charlevoix	993	15.4
Michigan	958	11.3
United States	1,084	13.8

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.

TABLE 6
Michigan Counties Most and Least Dependent on Transfer Payments in Total Personal Income: 1978

County	*Per capita*	*Percentage*
Bottom 10		
Oakland	$ 806	7.4
Macomb	731	7.8
Livingston	594	7.9
Midland	725	8.5
Clinton	642	8.7
Washtenaw	835	9.1
Ottawa	703	9.2
Eaton	725	9.3
Monroe	763	9.9
Genesee	921	10.2
Top 20		
Lake	$1,654	34.5
Roscommon	1,666	32.0
Keweenaw	1,700	30.9
Alcona	1,583	30.8
Montmorency	1,629	29.7
Oscoda	1,289	29.6
Gogebic	1,764	29.3
Ontonagon	1,461	29.3
Chippewa	1,359	27.2
Ogemaw	1,266	26.7
Iron	1,460	25.7
Schoolcraft	1,385	25.5
Clare	1,327	25.5
Houghton	1,342	25.3
Osceola	1,187	23.2
Alger	1,105	23.1
Cheboygan	1,335	22.7
Gladwin	1,223	22.4
Missaukee	1,076	22.2
Arenac	1,321	21.9
Michigan	981	11.6
United States	1,028	13.1

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.

tries that cater to them and to summer visitors offer low paying jobs, for the most part. The area provides summer employment for high school and college students as well as for older workers who stay there. A survey of the economic condition of these counties would likely find that the residents of Roscommon, Leelanau, Montmorency, Alcona, Oscoda, Benzie, Emmet, and Antrim counties consider themselves to be well off financially. In contrast, the survey would find a high proportion of the residents of Lake, Ontonagon, Alger, Chippewa, and Osceola counties locked into poverty.

TABLE 7
Ranking of Michigan Counties According to Per Capita Personal Income: 1978

County	Per capita personal income	Percentage change 1977 to 1978	County	Per capita personal income	Percentage change 1977 to 1978
Oakland	10,877	11	Luce	6,368	6
Macomb	9,385	12	Sanilac	6,366	13
Wayne	9,238	12	Wexford	6,281	9
Washtenaw	9,160	12	Antrim	6,251	15
Genesee	9,016	9	Benzie	6,238	14
Midland	8,542	9	Manistee	6,194	11
Ingham	8,516	10	Ionia	6,190	14
Saginaw	8,407	11	Mason	6,112	16
Kalamazoo	8,259	10	Arenac	6,025	10
Calhoun	8,217	10	Gogebic	6,020	13
Kent	7,980	13	Mackinac	5,968	6
Gd. Traverse	7,965	15	Menominee	5,931	13
Eaton	7,776	8	Cheboygan	5,863	14
Monroe	7,721	9	Delta	5,857	8
Lenawee	7,667	9	Baraga	5,785	11
Jackson	7,656	12	Oceana	5,708	17
Ottawa	7,609	14	Presque Isle	5,700	14
Bay	7,581	9	Iron	5,686	8
Berrien	7,570	13	Newaygo	5,656	12
Livingston	7,536	11	Iosco	5,571	7
Cass	7,489	14	Isabella	5,565	13
Shiawassee	7,469	11	Montmorency	5,472	11
Dickinson	7,341	10	Crawford	5,465	10
Clinton	7,341	13	Schoolcraft	5,455	8
Branch	7,336	10	Keweenaw	5,446	18
St. Clair	7,287	12	Gladwin	5,442	11
St. Joseph	7,276	10	Houghton	5,306	10
Lapeer	7,216	11	Roscommon	5,210	8
Tuscola	7,214	12	Clare	5,195	8
Emmet	7,144	13	Alcona	5,156	8
Huron	7,054	17	Osceola	5,121	12
Gratiot	6,965	10	Chippewa	4,999	13
Muskegon	6,894	12	Ontonagon	4,992	6
Leelanau	6,825	14	Kalkaska	4,921	6
Van Buren	6,761	15	Missaukee	4,879	15
Allegan	6,748	17	Lake	4,812	12
Marquette	6,747	16	Alger	4,779	8
Hillsdale	6,717	10	Ogemaw	4,754	3
Otsego	6,595	14	Mecosta	4,551	13
Alpena	6,485	14	Oscoda	4,383	7
Charlevoix	6,465	15			
Montcalm	6,412	14	Michigan	8,487	12
Barry	6,395	13	United States	7,840	11

SOURCE: Bureau of Economic Analysis, Regional Economics Information System.

BRIEF

U.S. Housing Markets, published by Advance Mortgage Corporation of Detroit, had these comments regarding Detroit in its 25 April 1980 subscriber's special release.

> The only true gentrification trend is in two fragmentary neighborhoods—Woodbridge, west of Wayne State University, cut up by expressways; and Corktown, west of downtown, five blocks left over after urban renewal for light industry.
>
> There has been strong revival in the city's prime residential enclaves, 30–75 years old, which never deteriorated or ceased being middle class, but suffered steep declines in value in the 50s and 60s. Comeback began in 1975 in Indian Village and the Palmer Woods area, and in 1977 in Rosedale Park, Boston-Edison and the Lafayette Park-Elmwood urban renewal area. First quarter 1980 sales in these neighborhoods have been twice as strong as in the suburbs.
>
> Both trends together affect fewer than 4,000 houses, less than one percent of Detroit's nonapartment units.
>
> Indian Village, which has some mansions of early auto magnates, has gone from an average $30,000 value in 1971 to the high 50s–60s in 1975, to $70–$80,000 today, and some as high as $150,000.
>
> In the four sectors of the Palmer Woods area, values increased 20 percent in 1978, 50 percent in 1979, and doubled or tripled since the early 1970s. In order of descending size, in Palmer Woods (which includes some mansions) typical value went from $50,000 to $150,000; Sherwood Forest from $40,000 to $90,000; Golf Course from $30,000 to $75–$80,000; Greenacres from $20–$30,000 to $40–$60,000.
>
> North Rosedale Park has appreciated 60 percent in 2½ years to $70–$80,000 and some to $90,000. South Rosedale Park is up 50 percent to $45–$60,000, and less affluent adjoining neighborhoods are up one-third, to $40–$45,000. Most buyers come from smaller homes in the city.
>
> Co-op townhouses in Lafayette Park (the only middle-class neighborhood close to downtown) have appreciated 60–75 percent and more since opening of the nearby Renaissance Center in 1977.

THE MICHIGAN STATE ECONOMIC RECORD
DIVISION OF RESEARCH
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
MICHIGAN STATE UNIVERSITY
BERKEY HALL
EAST LANSING, MICHIGAN 48824

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THE MICHIGAN STATE ECONOMIC RECORD

(ISSN: 0026-2455)

A MONTHLY REPORT ON BUSINESS CONDITIONS IN MICHIGAN

Volume 22 No. 6

JUNE 1980

Published by the Division of Research Graduate School of Business Administration Becker Hall

Michigan State University

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AIRLINE DEREGULATION

by STEVEN W. LEH, *Graduate Assistant, Department of Marketing and Transportation Administration, Michigan State University.*

In fall 1978, the 95th Congress passed and President Jimmy Carter signed into law the Airline Deregulation Act. It will dismantle the regulatory umbrella that has traditionally shielded the industry from the competitive influences of the marketplace, and it calls for the phasing out of the Civil Aeronautics Board (CAB) by 1985.[1]

The law was passed "to amend the Federal Aviation Act of 1958, to encourage, develop, and attain an air transportation system which relies on competitive market forces to determine the quality, variety, and price of air services."[2] This new position is a reversal of government policy from 1938 to 1975. But it continues to stress the assignment and maintenance of safety as the highest priority in air commerce and that the CAB shall prevent any deterioration in established safety procedures.[3]

To implement its new competitive philosophy, the CAB shall consider encouraging, developing, and maintaining an air transportation system relying on actual and potential competition to provide efficiency, innovation, and low prices, as well as to determine the variety, quality, and price of air transportation services. In this way, the act formalized former CAB chairman Alfred Kahn's practice of implementing de facto deregulation on a case by case basis. Concurrently, the CAB intends to maintain a comprehensive and convenient system of continuous scheduled airline service for small communities and for isolated areas, with direct federal assistance where appropriate.[4]

THE ERA OF COMPETITION

Unlike the era of protective regulation prevailing until 1975, the current period is one of excessive competition. Since deregulation, in no domestic route case, no matter how persuasive or vehement the objections of affected parties, has the CAB awarded operating authority to fewer than all "qualified" applicants.[5] This approach may violate the intent of Congress, which did not mean for the CAB completely to deregulate entry until 1982. Instead, Congress implicitly designated 1978–1982 as a transition period during which the CAB would gradually expose the highly regulated common carrier system to the rigors of the marketplace. This would allow communities to adjust to the evolving traffic patterns of the air carrier system as it responds to the needs and demands of the market. Thus, although de jure deregulation of entry in air transportation is not scheduled to arrive until 1982, de facto deregulation is already here.[6]

The liberalized entry policy means that any applicant demonstrating "fitness, willingness and ability" to serve a market will be issued a certificate under the automatic entry clause, the dormant authority clause, the experimental certificate provision, or other entry provisions.[7] The implications of this policy can only be fully understood in combination with the other changes wrought by the act, and carrier service alternatives and procedures have been altered in a number of ways.

Carriers now have greater flexibility to move their equipment around, concentrating assets where they can find the greatest return, and thus rationalizing their route structure. Nervous that constituents would blame their elected representatives for losses in air service, Congress specifically

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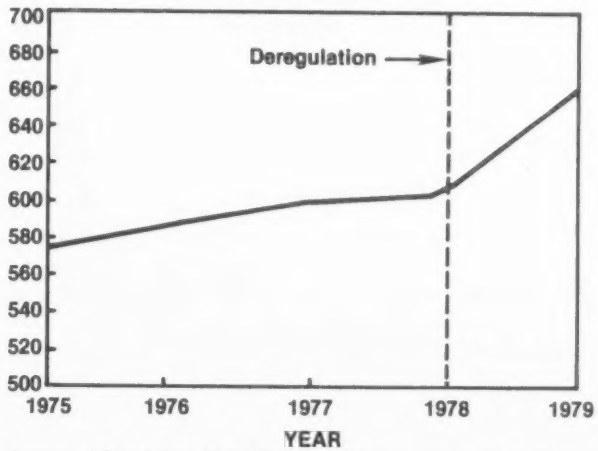
guaranteed "essential air service" to small communities. However, this portion of the law is couched in vague, if not vacuous, terminology.[8] In essence, Congress recognized the route restructuring that would occur (and subsequently has; see Figures 1 and 2). Trunk carriers, such as United Airlines, that link the nation's large hubs, strive to develop route structures best suited to their longer range aircraft. Thus, their average stage length, which was rising slowly prior to 1978, spurted after deregulation. Local carriers, such as Republic Airlines, that are regional and serve mostly medium and small hubs also have increased their average stage length since deregulation because they, too, find very short hauls more costly per passenger mile.

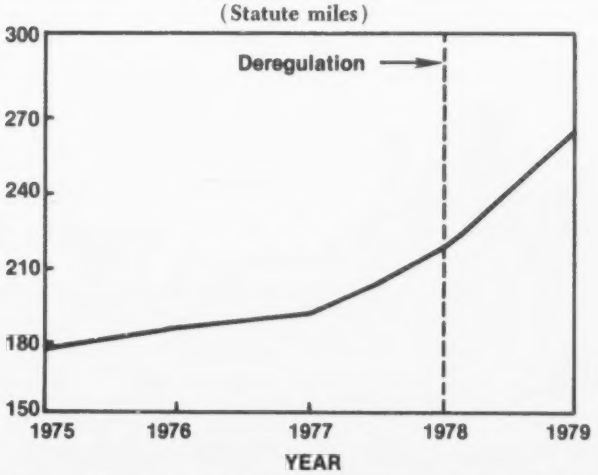
Congress specifically mandated the CAB to define an essential level of service for each of 555 communities. The CAB must ensure that each of those communities is served at that level for ten years, either by finding a carrier willing to provide the service or by subsidizing the last remaining carrier.[9]

FIGURE 1
Average Stage Length for Trunk Airline Carriers: October 1975–1979
(Statute miles)



SOURCE: Adapted from Mark H. Schlansky's presentation to the Transportation Research Board Committee on Aviation Demand Forecasting, 59th Annual Meeting, Washington, D.C., 22 January 1980.

FIGURE 2
Average Stage Length for Local Carriers: October 1975–1979
(Statute miles)



SOURCE: Adapted from Mark H. Schlansky's presentation to the Transportation Research Board Committee on Aviation Demand Forecasting, 59th Annual Meeting, Washington, D.C., 22 January 1980.

The maximum level the CAB set in its general guidelines issued in September 1979 was 160 round-trip seats a day, five days a week, or the service level the community had in 1977, whichever is less. The CAB believes that this level of service, assuming a 50 percent load factor, will make profits for a commuter airline serving a community. If the demand is any higher, the CAB maintains, the free market will ensure that it is met.[10] Nevertheless, a carrier may pull out of a market after giving a 90-day notice. If such action would reduce the level of air service below that deemed essential by the CAB, the carrier may be constrained from doing so for an additional 30 days or until another carrier has begun to provide "essential air service" to the affected community.[11]

It was presumably the intent of Congress, then, that no community be adversely affected due to loss of air service. However, the CAB appears to have adopted departure statistics as indicative of the level of service being provided on an aggregate basis. In testimony, Chairman Marvin S. Cohen stated: "We have heard complaints about service cutbacks, and there is no denying that the carriers have been using their new freedom to exit cities as well as their new freedom to enter them. Certainly, the nation as a whole experienced an aggregate increase in service, when measured solely in terms of departure statistics."[12] That may hold true for major hubs, but it is not the case for the 260 smaller cities that suffered a decrease in aircraft departures between 1 February 1978 and 1 February 1979.[13] Furthermore, in many communities the new entrant (frequently, a small commuter carrier) is willing to replace service lost by the departure of an incumbent (frequently, a large scheduled air carrier). But the community may be left with a smaller carrier that, although it may provide as many departures, does not provide the same aircraft and seat mile capacity, and it may be geared to off line points and offer less dependable service. Thus, the loss of service must be measured from two perspectives: quantitative (which the CAB has emphasized) and qualitative (which the CAB has "virtually ignored").[14]

Another key provision of major significance concerns fares. Carriers have the power to raise fares by as much as 5 percent on routes along which they control less than 70 percent of the traffic, and lower them by as much as 50 percent so long as the proposed fare would not be predatory as determined by the CAB.[15] Recently, the board modified this provision by approving a new three-tier fare system for the industry. It would allow airlines to raise fares an unlimited amount for route distances of 200 miles or less; 50 percent above base for distances up to 400 miles; and 30 percent above base for distances greater than 400 miles.[16] This pricing scheme could seriously affect out-state communities in Michigan and elsewhere.

In addition, as previously stated, the act will eliminate the CAB's powers over routes and fares by 1983 and will abolish the agency itself by 1985.[17]

THE REGULATORY PROSPECT

When the CAB ceases existence on 1 January 1985, responsibility for international service, domestic subsidy, and related matters will be transferred to the Department of Transportation (DOT). The act does not specify what happens to consumer protection functions. The Federal Trade Commission is the most likely candidate, according to the General Accounting Office, but the FTC is prohibited by law from controlling airlines; legislation will be needed to transfer those functions.[18] If the FTC does assume responsibility, its workload is such that carriers probably will not be scrutinized as closely as in the past. Antitrust authority will be transferred to the Department of Justice on 1 January 1983.[19]

DOT will assume international route authority and responsibility for maintaining essential air service at least until 1988. Current plans call for most of the CAB's essential service and subsidy division personnel to transfer en masse to DOT, indicating little difference in policy implementation after the transfer. However, one major difference is likely to be increased reliance on alternative means of transportation instead of subsidizing short-hop air transportation.[20]

William B. Johnston, Assistant Secretary of Transportation for Policy and International Affairs, underscored this point when he recently stated: "We don't want to be in the business of determining who will serve what route when or at what cost."[21] Moreover, Secretary Johnston sees "no substantive reasons why sunset of the CAB could not occur shortly after the essential services program is scheduled to be completed in 1982."[22] Reiterating the de facto deregulation philosophy contrary to congressional intent as conveyed in the act, Johnston states: "The department . . . wants to exercise as little influence as possible in the industry."[23]

THE MARKET OUTLOOK

Generally, carriers' responses to deregulation have been similar. Both domestic trunk and local service carriers have extended the length of haul and cut services to small communities. Furthermore, the economy has taken a sharp downturn, other regulations have been imposed on carriers, and external variables have significantly affected them. The changes in carrier operations are unsurprising if not predictable. The general industry trend toward longer stage lengths indicates that carriers are eliminating route segments that are not paying their way. As a result, some small and medium communities have suffered a decrease in service.

In addition, all carriers will be forced to modernize their fleets by 1985. At that time, the Clean Air Act, which specifies emission standards for aircraft, and the Federal Aviation Administration's noise-reducing requirements both come into effect. Clearly, the airlines are now forced to select routes on the basis of profitability to ensure that they have the capital required for such an undertaking.[24] Intensifying the need for profitable route selection are increased fuel costs. Since the 1974 OPEC oil embargo, fuel has quadrupled as an operating expense. In 1979, fuel comprised approximately 20.1 percent of an airplane's operating cost, compared to about 7 percent in 1973.[25]

Thus, airlines have been forced to raise fares to cover rising costs. The increases have been tempered by competition resulting from deregulation, hence increased costs cannot be fully passed on to travelers. This, in turn, exacerbates the difficulties of financing fleet renovations. Further compounding the difficulty is the loss of disposable income in the consumer sector. As the long awaited recession has finally hit, especially in Michigan, the level of disposable consumer income has significantly decreased, with discretionary income even further reduced. Given that air travel is highly income elastic and pleasure travel is highly price elastic as well, traffic has fallen off. The decline is reflected by the performance of the ten trunk carriers, who together lost $200 million in the fourth quarter of 1979; nine trunks reported total losses of $229.5 million in the first quarter of 1980. This performance compares to $8.6 million in profits during the first quarter of 1979.[26]

In short, the operating environment is characterized by greater flexibility in terms of both price setting and route selection, increasing operating costs, and reduced service demand due to a combination of increased fares and a declining level of disposable income. Thus, unlike past market downturns, deregulation means the carriers will have to ride out the storm without the benefit of a paternalistic CAB. Their ability to do so will partly depend on how well they have restructured themselves during the past two or three years. This restructuring, exhibited to some extent by the changes in stage length, is indicative of the economics underlying air transportation. While lift requires major power and energy inputs, forward movement requires very little. As a consequence, air transportation finds its main advantage in the long haul.[27] The optimum stage length allows the airplane to remain aloft for as long as possible, given its fuel capacity. Economies also result from minimizing the use of labor on the ground, meaning as few landings as possible.

EFFECTS ON MICHIGAN

Given the regulatory and economic environment in which air carriers are now operating, both individually and collectively, they have had to adjust strategically to fit their product offering to the changed market. The tactical methods chosen have had significant effects, particularly on small and medium communities. This is especially true in Michigan, as Tables 1 and 2 indicate.

As costs have increased and as carriers have been forced to absorb part of the expense due to the deregulated, competitive environment, marginally profitable routes have been dropped. This economic route rationalization reflects the ease of market entry and exit enjoyed by the airlines. It also reflects the fact that, unlike the previous era, when carriers were essentially granted a franchise on routes and could therefore afford to cross-subsidize them, profitability for all routes is required. Indeed, faced with escalating labor, aircraft replacement, and fuel costs, the industry was compelled to react as it has.

With or without deregulation, these costs would have risen due to current economic conditions. As noted earlier, decreasing disposable income and higher fares necessitated by increasing operating costs will mean that load factors

(Continued on page 6)

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	37.2	40.3	39.8 (Apr.)
Average weekly hours, U.S.	38.9	39.8	39.4 (Apr.)
Average hourly earnings, Michigan ($)	8.56	9.32	9.23 (Apr.)
Average hourly earnings, U.S. ($)	6.54	7.06	7.07 (Apr.)
U.S. motor vehicle production (units)	1,283,679	709,650	638,815 (Apr.)
Michigan electricity usage (mil. kwh.)	6,093	6,069	5,769 (Feb.)
Industrial (mil. kwh.)	2,805	2,391	2,534 (Feb.)
Residential (mil. kwh.)	1,945	2,199	1,868 (Feb.)
Raw steel production:			
Michigan (000 net tons)	1,025	803	585 (May)
United States (000 net tons)	12,789	10,658	9,226 (May)
Consumer price index (1967 = 100)			
Detroit area	213.2	242.9	248.2 (Apr.)
United States	211.5	239.8	242.5 (Apr.)
U.S. wholesale price index (1967 = 100)	232.0	262.3	263.7 (May)
Michigan farm prices received index (1967 = 100)	227	236	226 (Apr.)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, First 4 Months: 1979 and 1980

(Thousands of Dollars)

Area	Nonresidential 1979	Nonresidential 1980	Nonresidential Percentage change	Residential 1979	Residential 1980	Residential Percentage change	Total[a] 1979	Total[a] 1980	Total[a] Percentage change
Ann Arbor	23,442	46,390	+ 98	19,736	10,054	− 49	43,178	56,444	+ 31
Battle Creek	6,589	7,313	+ 11	11,922	2,737	− 77	18,511	10,050	− 46
Bay City	2,784	1,015	− 64	3,347	11,083	+231	6,131	12,098	+ 97
Detroit	350,630	265,890	− 24	350,594	176,686	− 50	701,224	442,576	− 37
Flint	20,202	27,743	+ 37	26,500	8,418	− 68	46,702	36,161	− 23
Grand Rapids	66,165	73,057	+ 10	65,702	35,556	− 46	131,867	108,613	− 18
Jackson	12,807	4,775	− 63	5,313	2,859	− 46	18,120	7,634	− 58
Kalamazoo–Portage	12,204	11,931	− 2	16,251	10,511	− 35	28,455	22,442	− 21
Lansing–East Lansing	33,686	29,587	− 12	35,048	25,779	− 26	68,734	55,366	− 19
Muskegon–Norton Shores–Muskegon Heights	2,443	2,585	+ 6	8,219	5,696	− 31	10,662	8,281	− 22
Saginaw	8,656	20,768	+140	15,225	6,767	− 56	23,881	27,535	+ 15
Michigan	603,770	527,989	− 13	679,514	372,381	− 45	1,283,284	900,370	− 30
United States	15,652,500	16,222,600	+ 7	23,296,100	17,376,200	− 25	38,948,600	33,598,800	− 14

SOURCE: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1979 and 1980 figures for nonbuilding construction contracts were $379,742,000 and $216,029,000 respectively, or a decrease of 43 percent. U. S. figures for nonbuilding construction contracts were $18,472,800,000 and $10,089,400,000 or a decrease of 45 percent.

Quarterly Motor Vehicle Employment and Assembly

Item	1977		1978				1979				1980
	3	4	1	2	3	4	1	2	3	4	1
EMPLOYMENT[a]											
Checker											
Michigan	1,102	1,166	1,117	1,118	1,084	1,140	1,207	1,194	1,182	1,099	982
Chrysler											
Michigan	82,701	84,047	78,744	82,799	75,187	81,664	75,316	70,238	58,182	55,456	47,273
United States	135,039	137,286	131,066	136,158	125,989	135,997	125,899	118,532	99,754	98,228	86,341
Ford[b]											
Michigan	118,775	124,098	124,187	127,148	126,300	135,377	132,298	129,526	117,630	111,790	104,321
United States	222,119	233,911	234,635	239,517	233,314	253,536	245,253	240,054	211,763	196,038	181,595
General Motors											
Michigan	252,000	280,000	264,000	278,000	267,000	289,000	295,000	296,000	291,000	288,000	267,000
United States	564,000	624,000	588,000	619,000	594,000	643,000	644,000	650,000	582,000	602,000	561,000
ASSEMBLY											
Dearborn	39,828	37,107	40,230	70,007	39,072	83,017	96,572	92,774	85,970	68,819	65,971
Detroit	126,505	126,739	130,969	140,723	54,857[c]	89,563[c]	130,475[c]	113,866[c]	56,399[c]	78,055	57,000[d]
Detroit (truck)	8,667	7,577	7,587	11,443	11,142	30,753[c]	33,693[c]	28,503[c]	12,861[c]	16,534	18,000[d]
Flint	53,905	100,181	93,380	104,042	76,157	109,192	115,405	110,135	56,914	90,222	69,179
Flint (truck)	109,197	103,976	107,414	116,436	103,549	104,839	114,846	95,075	60,985	75,541	70,123
Hamtramck	94,246	72,429	56,098	86,545	56,808	54,230	44,901	62,806	15,345	30,134	c
Kalamazoo	1,314	1,095	1,361	1,036	809	1,019	1,134	1,268	1,203	1,161	770
Lansing	45,921	99,322	93,080	110,381	62,327	116,726	130,644	130,363	72,684	96,143	104,913
Pontiac	29,710	83,219	75,104	87,334	61,666	82,652	91,712	85,977	46,578	61,082	50,974
Pontiac (bus & truck)	38,253	40,474	55,041	67,569	61,741	72,398	77,144	73,922	51,628	42,135	33,850
Warren (bus & truck)	78,855	70,738	76,322	94,415	72,181	84,504	76,365	48,873	5,027	19,043	13,000[d]
Wayne	59,823	67,939	76,242	76,599	63,214	55,607	50,477	46,765	34,081	28,800	27,840
Wayne (truck)	32,905	50,706	53,462	56,436	48,390	52,388	56,052	51,994	21,305	34,256	25,355
Wixom	43,875	43,677	42,915	47,639	36,508	46,902	51,132	36,527	20,013	32,604	8,724
Ypsilanti	69,327	62,270	60,220	73,733	57,178	38,891	38,797	75,420	73,508	70,507	84,598
Total Michigan											
Passenger car	564,544	693,978	669,599	798,039	508,596	654,346	751,250	755,901	462,695	557,527	470,000[d]
Bus and truck	266,877	273,471	299,826	341,141	297,003	368,325	358,100	298,367	151,806	187,509	160,000[d]
Total United States											
Passenger car	1,931,390	2,306,400	2,267,474	2,656,507	1,850,701	2,398,411	2,411,307	2,482,907	1,655,546	1,884,756	1,783,732
Bus and truck	849,649	850,989	865,427	1,019,266	851,996	982,232	1,024,655	916,996	529,092	564,118	499,525
Total Canada											
Passenger car	196,129	282,256	289,695	345,842	229,593	297,157	307,823	281,806	171,427	227,966	225,969
Bus and truck	113,923	171,998	171,127	185,031	120,199	180,355	200,162	190,698	107,988	135,532	146,015

SOURCE: Ward's *Automotive Reports;* Motor Vehicle Manufacturers Association of the United States, Inc., PVI report; and companies.

a. Average monthly wage and salary employment of companies with assembly plants in Michigan; includes nonautomotive.

b. Excludes Ford Aerospace and Communications Corporation and finance and insurance subsidiaries.

c. Chrysler's Jefferson Avenue plant has been converted to truck production. The plant had no production during July and August and began assembling trucks during the latter part of September. The Hamtramck plant closed 4 January 1980.

d. Estimated.

Airline Deregulation

(Continued from page 3)

will fall. As this happens, carrier revenues also decline, and profits plummet. In turn, carriers' cash reserves are drained. This leaves the airlines in the tenuous position of having to comply with the EPA and FAA regulations, which require complete fleet renovations by 1985, with depressed financial resources. To avoid having to go to the financial markets in serious trouble, as well as to improve current earnings, the route restructuring has taken place. It is erroneous to think that the restructuring, and the sub-

TABLE 1
Airport Statistics for Selected Michigan Cities, 1977–1979

	1977	*Percentage change 1976–1977*	*1978*	*Percentage change 1977–1978*	*1979*	*Percentage change 1978–1979*
Flint Bishop Airport						
Number of passengers						
In	132,101	+13.5	141,931	+7.4	127,674	−10.0
Out	129,710	+13.7	138,213	+6.6	121,188	−12.3
Total	261,811	+13.6	280,144	+7.0	248,862	−11.2
Pounds of airmail						
In	129,804	−69.3	140,284	+8.1	96,606	−31.1
Out	425,713	−37.6	459,433	+7.9	373,179	−18.8
Total	555,517	−49.7	599,717	+8.0	469,785	−21.7
Tons of cargo						
In	1,338.8	+7.8	1,262.5	−5.7	880.9	−30.2
Out	155.1	−42.7	222.7	+43.6	122.1	−45.2
Total	1,493.9	−1.2	1,485.2	−0.6	1,003.0	−32.5
Grand Rapids–Kent County International Airport						
Number of passengers						
In	364,127	+18.0	420,607	+15.5	458,304	+9.0
Out	365,164	+17.9	420,709	+15.2	453,958	+7.9
Total	729,291	+18.0	841,316	+15.4	912,262	+8.4
Pounds of airmail						
In	630,029	−57.3	810,186	+28.6	501,281	−38.1
Out	1,920,378	−5.1	1,951,901	+1.6	1,296,214	−33.6
Total	2,550,407	−27.1	2,762,087	+8.3	1,797,586	−34.9
Tons of cargo						
In	2,008.2	+12.4	1,961.0	−2.4	1,544.0	−21.3
Out	1,517.9	+4.2	1,631.6	+7.7	1,178.8	−27.8
Total	3,523.1	+8.7	3,592.6	+2.0	2,722.8	−24.2
Lansing Capital City Airport						
Number of passengers						
In	205,163	+11.8	225,958	+10.1	224,978	−0.4
Out	201,681	+13.2	221,301	+9.7	220,046	−0.6
Total	406,844	+12.5	447,259	+9.9	445,024	−0.5
Pounds of airmail						
In	271,338	−82.8	584,446	+115.4	395,266	−32.4
Out	709,628	−67.6	970,149	+36.7	897,220	−7.5
Total	980,966	−74.0	1,554,595	+58.5	1,292,486	−16.9
Tons of cargo						
In	1,208.0	−63.8	1,164.0	−3.6	846.7	−27.3
Out	457.0	−64.2	445.9	−2.4	463.9	+4.0
Total	1,665.0	−63.9	1,609.9	−3.3	1,310.6	−18.6
Saginaw Tri-City Airport						
Number of passengers						
In	205,072	+9.3	225,416	+9.9	217,020	−3.7
Out	205,690	+8.5	226,745	+10.2	219,629	−3.1
Total	410,762	+8.9	452,161	+10.1	436,649	−3.4
Pounds of airmail						
In	49,088	−94.2	67,316	+37.1	59,293	−11.9
Out	524,261	−27.7	388,259	−25.9	239,694	−38.3
Total	573,349	−63.5	455,575	−20.5	298,987	−34.4
Tons of cargo						
In	998.6	+7.8	945.1	−5.4	668.7	−29.3
Out	468.1	+19.6	506.8	+8.3	275.6	−45.6
Total	1,166.7	+11.3	1,451.9	−1.0	944.3	−35.0

SOURCE: Bureau of Transportation Planning, Michigan Department of Transportation, Aviation Planning Monthly Air Carrier Statistics, special release.

sequent loss of service some communities have experienced, resulted from deregulation. Rather, the changes reflect long-run industry strategies for survival in the dynamic, volatile market. Deregulation has only increased the speed at which they have occurred.

The route changes to date are indicative of air carriers' strategic efforts to fit their resources and competencies to the market evolution that has taken place. As the market continues to evolve, carriers will be forced to continue adapting or risk failure. Since no one carrier has the resources to serve the entire market, selective growth is the key. This means resources will be deployed where potential returns are greatest. The current route structures, which adversely affect Michigan, attest to this. Moreover, the trend among trunk carriers to eliminate or reduce services at small hub cities such as Lansing and Saginaw will continue unless altered economic conditions allow carriers profitably to initiate or expand operations at these and similar points. At present, for small and medium cities in Michigan and elsewhere, reduced trunk carrier service is the net result.

CONCLUSION

Small communities generally have not had large jet service and are not apt to receive any as a result of deregulation. Medium communities are likely to see trunk carriers continue to pull out of marginally profitable routes. Service can be expected to be replaced by smaller commuter airlines. However, since the CAB has implemented de facto deregulation more quickly than Congress intended, the commuter airlines are unable, at present, to handle all the additional demands placed upon them.[28]

In short, despite congressional rhetoric to the contrary, small and medium communities have suffered a loss of air service, if not in quantity, certainly in quality. Furthermore, unless a community measures up in terms of a carrier's balance sheet and return on investment requirements, the diminution in service will continue.

In addition to communications and energy, a state's growth, indeed society's, is inexorably tied to its transportation system. Without any one of these fundamental ingredients, development will not occur. Moreover, if any one of these vital components is deficient, either qualitatively or quantitatively, investment in plant will not be forthcoming, and existing industry may relocate.[29] Clearly, Michigan cannot afford such a circumstance. It is beyond the scope of this article to advance detailed strategic alternatives from either a community or state perspective. However, suffice it to say that unless decisive action is taken to counteract the reduction in air service and the state's eco-

TABLE 2
Departures of United, Republic, and Freedom Airlines Affecting Flint, Grand Rapids, Lansing, and Saginaw during 1980

City and time of day	*Airline*	*Number of seats*	*Action*
		Westbound (Chicago)	
Flint:			
7:17 a.m.	United	134	Discontinued
11:24 a.m.	United	103[a]	Rescheduled to 9:50 a.m.
6:00 p.m.	United	103	Rescheduled to 9:50 p.m.
Grand Rapids:			
7:30 a.m.	United	103	Rescheduled to 8:10 a.m.
12:25 p.m.	United	103	Discontinued
2:51 p.m.	United	103	Discontinued
5:58 p.m.	United	103	Discontinued
9:05 p.m.	United	103	Rescheduled to 9:00 p.m.
12:00 p.m.	Republic	130[a]	Added
3:15 p.m.	Republic	130[b]	Added

TABLE 2 (Cont.)

City and time of day	*Airline*	*Number of seats*	*Action*
Lansing:			
7:52 a.m.	United	103	Discontinued
11:20 a.m.	United	103	Rescheduled to 10:45 a.m.
6:07 p.m.	United	103	Discontinued
9:45 p.m.	United	103	Discontinued
7:22 a.m.	Republic	130[b]	Added
11:20 a.m.	Republic	130[c]	Added
7:25 p.m.	Republic	130[b]	Added
Saginaw:			
7:45 a.m.	United	103	Discontinued
12:09 p.m.	United	103	Rescheduled to 10:50 a.m.
2:39 p.m.	United	103	Discontinued
9:20 p.m.	United	103	Rescheduled to 10:25 p.m.
5:55 p.m.	United	103	Discontinued
7:00 a.m.	Republic	130[a]	Added
2:25 p.m.	Republic	130[c]	Added
6:25 p.m.	Republic	130[a]	Added
		Eastbound (Cleveland)	
Flint:			
7:05 a.m.	United	103	Discontinued
2:05 p.m.	United	103	Discontinued
9:10 p.m.	United	103[b]	Discontinued
7:18 a.m.	Freedom	50	Added
2:28 p.m.	Freedom	50	Added
Grand Rapids:			
7:10 a.m.	United	134	Discontinued
10:45 a.m.	United	103	Discontinued
1:50 p.m.	United	103	Discontinued
5:29 p.m.	United	103	Discontinued
9:39 p.m.	United	103	Discontinued
6:50 a.m.	Freedom	50	Added
11:35 a.m.	Freedom	50	Added
2:20 p.m.	Freedom	50	Added
6:30 p.m.	Freedom	50	Added
Lansing:			
7:15 a.m.	United	103	Discontinued
10:46 a.m.	United	103	Discontinued
5:29 p.m.	United	103	Discontinued
6:36 a.m.	Freedom	50	Added
6:29 a.m.	Freedom	50	Added
Saginaw:			
7:22 a.m.	United	103	Discontinued
10:57 a.m.	United	103	Discontinued
5:20 p.m.	United	103	Discontinued
10:30 p.m.	United	103	Discontinued
6:50 a.m.	Freedom	50	Added
11:30 a.m.	Freedom	50	Added
6:20 p.m.	Freedom	50	Added

SOURCE: Bureau of Transportation Planning, Michigan Department of Transportation, special release.
a. Shared with Lansing.
b. Shared with Saginaw.
c. Shared with Grand Rapids.

nomic distress, these factors will continue to exacerbate one another.

NOTE: The author wishes to express his indebtedness to Professor John L. Hazard for his time, assistance, and guidance whenever needed. He also is grateful to William Margaritis, of state senator Robert Geake's office, for his assistance in acquiring selected data from the Michigan Department of Transportation.

CITATIONS

1. Public Law 95-504 (24 October 1978). The act, 92 Stat. 1705, does not constitute a separate body of legislation, but instead amends several existing laws, of which the Federal Aviation Act is the most significant. See Paul Stephen Dempsey, "The Rise and Fall of the Civil Aeronautics Board—Opening Wide the Floodgates of Entry," *Transportation Law Journal* 11, no. 1 (1979):93.
2. Conference Report, Airline Deregulation Act of 1978, Rep. No. 95-1779, 95th Cong., 2d sess., 53 (12 October 1978).
3. 49 U.S.C. § 1302 (a)(1) and (a)(2)(1979).
4. 49 U.S.C. § 1302 (a)(8) and (a)(9)(1979).
5. Dempsey, "Civil Aeronautics Board," p. 175.
6. Ibid., pp. 174–75.
7. 49 U.S.C. § 1371 (d)(7)(A)(1979). Under this provision, each certified passenger carrier may apply during the first month of 1979, 1980, and 1981 for nonstop route authority between any pair of points that has not been protected by filing a notice. Under 49 U.S.C. § 1371 (d)(5)(A)(O) (1979), a certificate authorizing transportation between two points for which the carrier has not provided a minimum level of five round trips a week for thirteen weeks during the preceding twenty-six-week period is considered dormant and must be awarded within sixty days to the first carrier submitting an application in compliance with CAB regulations. An exception exists for seasonal markets under 49 U.S.C. § 1371 (d)(5)(B)(E)(1979). Under 49 U.S.C. § 1371 (d)(8)(1979), the CAB may grant an application for only a temporary period whenever it determines that a test period is desirable. Also see 49 U.S.C. § 1371 (d)(6)(1979), 49 U.S.C. § 1386 (b)(1979), and 49 U.S.C. § 1551 (a)(1)(A)(1979).
8. See 49 U.S.C. §§ 1389, 1371, 1386, 1376, 1371 (1979). Congress is empowered and required under Article 1, Section 8, of the Constitution to regulate commerce between and among states. Having neither the time nor the expertise to do so, Congress has written all statutory criteria governing all modes of transportation in somewhat vague terms. "Essential service," in this act, and such other imprecise terminology as "fitness, willingness and ability," "public convenience and necessity," and "public interest" are included in statutory directions for rail carriers (49 U.S.C. §§ 10901, 10903, 10909 [1979]), motor and water carriers (49 U.S.C. §§ 10922, 10923 [1979]), brokers of motor carrier transportation (49 U.S.C. § 10924 [1979]), and air transport legislation. See Dempsey, "Civil Aeronautics Board," p. 183.
9. 49 U.S.C. § 1389 (a)(2)(A), (2)(C), and (4)(A) (1979); and 49 U.S.C. § 1386 (4)(B), (5), and (6) (1979).
10. See "The Airlines Hit a Downdraft," *Business Week*, 5 November 1979, p. 110.
11. 49 U.S.C. § 1386 (6)(1979).
12. Testimony of Marvin S. Cohen, Chairman, Civil Aeronautics Board, before the Subcommittee on Aviation, Senate Committee on Commerce, Science and Transportation, 25 April 1979, p. 34.
13. Civil Aeronautics Board, *Report on Airline Services, Status on February 1, 1979* (Washington, D.C.: 1979), pp. 43–50.
14. Dempsey, "Civil Aeronautics Board," n. 428, p. 178.
15. 49 U.S.C. § 1371 (a)(1)(A) and (a)(1)(B)(1979).
16. Memorandum from Senator Howard H. Cannon, Chairman, Senate Committee on Commerce, Science and Transportation, 14 May 1980. Base is considered the standard industry fare level for the same or essentially similar class of service. 49 U.S.C. § 1371 (a)(1)(B)(1979).
17. 49 U.S.C. §§ 1378, 1379, and 1321 (4)(1979).
18. 49 U.S.C. §§ 1378, 1379, and 1384(1979). See also Michael Feazel, "Industry Prepares for Demise of CAB in 1985," *Aviation Week and Space Technology*, 3 March 1980, p. 176.
19. 49 U.S.C. § 1382 (3)(1979). See also Feazel, "Demise of CAB," p. 177.
20. 49 U.S.C. § 1382 (b)(1)(B) and (b)(1)(A)(1979); and Feazel, "Demise of CAB," p. 177.
21. "Transportation Department Backs Early CAB Sunset," *Aviation Week and Space Technology*, 7 April 1980, p. 32.
22. Feazel, "Demise of CAB," p. 32.
23. Ibid.
24. Individual carriers will be forced to make varying degrees of capital investment due to fleet composition, but Eastern Air Lines and TWA are the most seriously threatened. Both have a large proportion of fuel-inefficient jets, and both are highly leveraged. See "Airlines Hit a Downdraft," pp. 104–12.
25. Linda Kloster, ed., *Air Transport 1979* (Washington, D.C.: Air Transport Association of America, 1979), p. 3. This is an industry average, and there may be substantial individual differences, depending on a carrier's fuel contracts. Moreover, if a carrier does not have a long-term supply guaranteed, it will have to purchase much of its crude on the spot market, where prices are significantly (10–25 percent) higher.
26. Michael Feazel, "U.S. Trunks Again Report Record Losses," *Aviation Week and Space Technology*, 5 May 1980, pp. 28–29.
27. John L. Hazard, *Transportation* (Cambridge, Md.: Cornell Maritime Press, 1977), p. 233.
28. See the following articles in *Aviation Week and Space Technology:* "Traffic of Non-trunks Extends Growth," 21 April 1980, p. 30; "Prolonged Deregulation Impact Seen," 3 March 1980, p. 184; "Commuter Airline Growth Predicted," 28 April 1980, p. 25; and "February Trunk Traffic Sags Despite Some Individual Gains," 10 March 1980, p. 27.
29. Dempsey, "Civil Aeronautics Board," n. 428, p. 179.

THE MICHIGAN STATE ECONOMIC RECORD
DIVISION OF RESEARCH
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
MICHIGAN STATE UNIVERSITY
BERKEY HALL
EAST LANSING, MICHIGAN 48824

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THE
MICHIGAN
STATE
ECONOMIC
RECORD

(ISSN: 0026-2455)

A MONTHLY REPORT
ON BUSINESS CONDITIONS
IN MICHIGAN

Volume 22 No. 7
JULY-AUGUST 1980

Published by the
Division of Research
Graduate School of
Business Administration
Berkey Hall

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Michigan State University

Michigan
State
University

EAST LANSING
MICHIGAN 48824

Published monthly, except July and August, when bimonthly. Second class postage paid at East Lansing, Michigan. Distributed on request to residents of the State of Michigan.

Permission to reprint granted upon written request.

MICHIGAN'S LODGING INDUSTRY

by JOHN H. LEARY, *Director, Management Advisory Services, Laventhol & Horwath.*

In recent years, the Michigan lodging market underwent a renaissance. Sales, occupancy, and average rate of occupancy increased every year from 1975 through 1978, and development activity was strong. The industry was expected to continue expanding at an annual rate of 2 to 4 percent. Recently, however, occupancy has declined, and the future is being regarded cautiously.

Several factors have combined to favor the state's lodging industry, much of which, of course, is in Detroit. Crime is down dramatically in Detroit, making people less hesitant to venture into center city areas. In addition, Detroit has been cited as having relatively unpolluted air, considering its size. Furthermore, the residents of the major metropolitan areas in the state have begun to feel more favorable about their cities. As a result, the images of these areas are improving, which leads to greater lodging demand.

Perhaps the most favorable indications are two recent coups. First, Detroit hosted the 1980 Republican National Convention, and from all reports, handled it professionally and successfully. The city and state received valuable positive publicity. This is expected to aid future convention sales efforts. Second, the National Football League has pledged the 1982 Superbowl to the Pontiac Stadium (Silverdome). This event is likely to rival or exceed the Republican Convention in media coverage and revenue generating potential. The combination of these events should greatly improve the state's visibility in the national marketplace. If press reports continue to be favorable, a greatly increased share of the regional and national convention market could result. Perhaps more important, these reports help to improve the area's image in the minds of visitors and residents alike.

However, while Michigan's stake in the national convention market has been growing, other changes have taken place. The national economy is in a recession precipitated by the increasingly high cost of energy, general inflation, and artificially high interest rates. This has had a particularly strong impact on the automobile industry and thus on Michigan. The growing market share of Japanese automakers has exacerbated the situation.

The effect of these events on the Michigan lodging industry is shown in Table 1. These data contain a wealth of information and must be analyzed carefully. They reveal that, between first quarter 1979 and first quarter 1980, room sales throughout the state increased by 7.5 percent. However, occupancy is down 7.3 percent. The increase in room sales has been accomplished by a 15.8 percent increase in room sales per occupied room, which is commonly called average rate. Most properties in the state have raised rates substantially to offset rapidly rising energy and labor costs. The latter continue to be legislated higher through mandated

Laventhol & Horwath is an accounting firm specializing in the hospitality, leisure time, and real estate industries. It publishes a monthly statistical analysis, *Michigan Trend of Business in the Lodging Industry.*

Midyear Review, by David I. Verway / page 3

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TABLE 1
Lodging Trend Report — First 3 Months, 1980, Compared with First 3 Months, 1979

	Sales, percentage change			Occupancy		Double occupancy		Room sales per occupied room	
	Total	Rooms	Food and beverage	March 1980	Percentage change	March 1980	Percentage change	March 1980	Percentage change
Total Michigan	4.4	7.5	0.1	63.6	−7.3	33.5	4.9	$34.30	15.8
Affiliation									
Chain	6.9	10.4	0.8	69.3	−4.8	33.7	−0.2	$33.91	15.9
Independent	0.2	1.2	−0.6	52.9	−12.9	33.2	13.8	35.23	15.9
Location									
Central city	−3.5	−4.1	−3.0	43.3	−16.0	26.6	7.9	$41.81	15.9
Suburban	7.2	11.8	0.5	68.0	−6.6	27.4	8.9	35.24	18.6
Highway	6.0	5.6	6.7	61.5	−8.0	23.0	7.3	29.64	15.1
Airport	a	a	a	a	a	a	a	a	a
Resort	6.1	9.9	3.0	71.6	−1.4	56.9	−3.3	30.74	10.5
Occupancy									
Less than 54.07%	−6.3	−7.6	−4.7	37.7	−23.3	34.1	12.5	$36.36	18.0
54.07 to 68.31%	3.8	4.6	2.9	62.4	−3.1	37.2	10.0	31.86	11.5
68.31 to 77.00%	7.3	13.0	−0.3	69.0	−5.1	24.8	−0.7	37.55	18.4
More than 77.00%	8.1	12.0	1.4	80.1	−3.7	40.2	0.2	32.42	15.5
Room rate									
Less than $21.60	−2.5	−2.3	−5.0	63.3	−16.5	37.9	22.8	$18.10	11.1
$21.60 to $28.17	4.5	5.6	3.1	61.1	−2.6	44.2	−1.7	26.49	8.6
$28.17 to $34.34	5.3	9.3	−2.2	61.9	−6.5	42.9	6.2	32.25	15.4
More than $34.34	4.0	7.2	0.6	66.6	−8.5	22.5	0.6	41.81	19.1
Number of rooms									
Fewer than 150	0.3	1.5	−1.2	64.2	−9.1	38.6	1.6	$27.26	10.7
150 to 299	7.0	11.2	1.5	69.8	−3.1	35.2	5.3	35.71	16.4
300 to 600	6.8	9.6	2.4	67.1	−10.3	25.3	1.4	41.95	21.5
More than 600	a	a	a	a	a	a	a	a	a
Type									
Hotel	1.9	6.4	−3.0	60.0	−7.3	34.3	4.3	$38.23	15.5
Motor hotel	7.8	8.7	6.2	67.3	−7.4	32.1	6.3	30.68	16.4
Zone									
West	7.6	10.1	4.5	68.7	−1.5	49.0	−1.8	$27.43	10.1
East	9.4	12.5	5.3	72.2	−2.9	36.1	2.4	32.45	16.0
Southeast	2.6	6.0	−2.1	60.4	−10.1	24.5	6.8	37.23	18.2

a. Insufficient response.

increases in the minimum wage, in Social Security costs and maximum levels, and in funding of pension plans.

The occupancy decline was caused by the recession which affected the automobile industry last summer and is now widespread. The declines have been most severe in center city areas and in properites in the lowest occupancy and average rate quartiles The data indicate that no segment of the lodging industry has generated increased occupancy this year.

Average rate increases have more than offset the decreases in occupancy. The largest increase was 21.5 percent, experienced by properties with 300 to 600 rooms. Many segments achieved increases in the 15 percent to 18 percent range. Interestingly, the lowest growth in average rate occurred in the western part of the state, in the second rate quartile, and in resort locations. These three categories also had the lowest decreases in occupancy, 1.5 percent, 2.6 percent, and 1.4 percent respectively. The data suggest that some rate sensitivity exists in lodging demand in the state.

Food and beverage sales at lodging properties throughout the state are virtually unchanged overall from last year. Considering the effects of inflation, this means that real sales are down. Increases have been highest in the highway and motor hotel segments, 6.7 percent and 6.2 percent respectively. The largest decreases occurred in the lowest occupancy and rate quartiles, 4.7 percent and 5 percent respectively.

Analyzing the data in absolute terms shows that Michigan's overall occupancy stood at 63.6 percent through March 1980. Chain properties achieved a level of 69.3 percent, which is more than a 16 point advantage over the 52.9 percent experienced by independent facilities. Properties in the eastern part of the state ran an overall occupancy of 72.2 percent, the highest of any category. Center city hotels had a relatively low 43.3 percent.

Overall room sales per occupied room stood at $34.30 through March 1980. The highest rates were in center city hotels and in hotels with 300 to 600 rooms, $41.81 and $41.95 respectively. The lowest rates were in small properties and in the western part of the state, $27.26 and $27.43 respectively.

Most owners and operators see these occupancy declines as temporary. They expect a rebound to begin in 1981. Many note that the negative effects of the much

(Continued on page 8)

MIDYEAR REVIEW

by DAVID I. VERWAY, *Research Professor, Division of Research, Graduate School of Business Administration, Michigan State University*

The Charlevoix area economy experienced a 21 percent decline in the number of wage and salary jobs between June 1979 and June 1980, a result of losing 750 jobs in automotive-related factories. Cass County lost 1,250 such jobs, causing wage and salary employment to decline by 18 percent. Other small labor markets similarly affected are Montmorency, Branch, Alcona-Iosco, Lenawee, Hillsdale, the Thumb area, Emmet, Missaukee-Wexford, Clare, Antrim, and Berrien. Slumping steel demand has depressed the Rogers City area, where U.S. Steel operates the world's largest limestone quarry. Limestone is a flux in the extraction of iron from ore. In Marquette County, the Cleveland Cliffs Iron Company, which makes pellets from iron ore, slashed its payrolls by 2,000 at the end of June. The effects will appear in the July employment data. Ontonagon County is racked by a strike which began in August at the White Pine copper mine.

TABLE 1
Michigan Labor Markets Listed According to Percentage Change in Number of Nonfarm Wage and Salary Jobs: June 1979–June 1980

County or counties	*Percentage change*	*County or counties*	*Percentage change*
Mackinac	+28	Washtenaw	− 4
Osceola	+11	Bay	− 5
Ontonagon	+10	Crawford	− 5
Lake	+ 8	Oscoda	− 5
Luce	+ 7	Otsego	− 5
Roscommon	+ 7	Alpena	− 6
Cheboygan	+ 5	Arenac	− 6
Houghton-Keweenaw	+ 5	Berrien	− 6
Chippewa	+ 4	Gratiot	− 6
Delta	+ 4	Ogemaw	− 6
Alger	+ 3	Lapeer-Livingston-	
Baraga	+ 3	Macomb-Oakland-	
Gogebic	+ 3	St. Clair-Wayne	− 7
Midland-Gladwin	+ 3	Presque Isle	− 7
Iron	+ 1	Antrim	− 8
Isabella	+ 1	Clare	− 8
St. Joseph	0	Jackson	− 8
Clinton-Eaton-Ingham-		Missaukee-Wexford	− 8
Ionia	− 1	Huron	− 9
Dickinson	− 1	Sanilac	− 9
Kalamazoo-Van Buren	− 1	Tuscola	−10
Manistee	− 1	Saginaw	−11
Marquette	− 1	Lenawee	−12
Schoolcraft	− 1	Genesee-Shiawassee	−13
Grand Traverse-		Alcona-Iosco	−14
Kalkaska-Leelanau	− 2	Hillsdale	−14
Mason	− 2	Branch	−15
Mecosta	− 2	Montmorency	−16
Montcalm	− 2	Cass	−18
Newaygo	− 2	Charlevoix	−21
Allegan	− 3		
Kent-Ottawa	− 3	Upper Peninsula	+ 1
Muskegon-Oceana	− 3	Michigan	− 7
Benzie	− 4	United States	0
Calhoun-Barry	− 4		
Menominee	− 4		

SOURCE: Bureau of Labor Statistics, special release; and Michigan Employment Security Commission, special release.

Among large metropolitan areas, Flint has suffered relatively the largest job decline (13 percent), followed by Saginaw (11 percent), Jackson (8 percent), and Detroit (7 percent). None of this state's metropolitan areas has been spared the effects of sagging demand for North American cars and trucks. (See Table 1.)

Tourism was higher this summer than last. This is particularly true in the Upper Peninsula, in the Mackinac, Houghton-Keweenaw, and Alger areas. In the Northern lower peninsula, Roscommon, Cheboygan, Osceola, and Lake have fared well.

One area, Midland, stands out because of its steady growth through the downturn, despite a heavy dependence on manufacturing. It is the home of Dow Chemical as well as Dow Corning.

Statewide, employment in durable goods factories fell by nearly one-quarter; in construction by one-sixth; and in transportation, communication, and public utilities by about one-sixth. Retail employment slipped slightly, while gains were posted by services; finance, insurance, and real estate; and government.

Short-Term Outlook

The statewide July employment tally (wage and salary workers plus self-employed) indicates a slight improvement in that the year-to-year difference (−7.3 percent) was narrower than it was in June (−7.6 percent) and May (−8.8 percent). Considering that the 1981 models will start rolling from assembly lines in August, and that production will accelerate through at least October, Michigan's employment statistics should make less dismal reading during the next few months than currently. Beyond that, much depends on demand for large cars and small trucks. April 1980 will mark the second anniversary of the drop in demand for such vehicles, meaning that there is a growing pent-up requirement to satisfy the transportation needs for large households. The leveling of gasoline and diesel oil prices is another plus for this market segment, although the odds for their remaining at present levels for many months are virtually zero. Auguring against a resurgence in big car demand are the financial condition of most household budgets and the prospect of a tight situation in financial markets generally. The most likely scenario is slow recovery in big cars and vans until spring 1981, and then a more rapid increase in the rate of sales gain.

This summer, Chrysler Corporation began producing its K-car, a front-wheel drive vehicle that replaced the Aspen and Volare models. Trenton Engine in New Jersey makes the powerplants for the K-cars. The Jefferson Avenue plant in Detroit and the Newark, Delaware, plant assemble these mid-size cars. Chrysler will continue to assemble light trucks at its plant in Warren, Michigan, and at a somewhat faster clip than a short while ago, inasmuch as the Missouri truck plant near St. Louis has been closed and Jefferson Avenue converted. Chrysler continues to manufacture V-8 engines at its Mound Road plant in Detroit. Even so, in October 1980 there will likely be fewer

(Continued on page 7)

The MICHIGAN STATE ECONOMIC RECORD

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	42.2	39.7	39.4 (May)
Average weekly hours, U.S.	40.1	39.4	39.4 (May)
Average hourly earnings, Michigan ($)	8.75	9.24	9.22 (May)
Average hourly earnings, U.S. ($)	6.63	7.08	7.12 (May)
U.S. motor vehicle production (units)	1,124,377	638,815	634,968 (June)
Michigan electricity usage (mil. kwh.)	5,779	5,917	5,698 (Apr.)
Industrial (mil. kwh.)	2,729	2,550	2,453 (Apr.)
Residential (mil. kwh.)	1,741	1,950	1,806 (Apr.)
Raw steel production:			
Michigan (000 net tons)	981	585	365 (June)
United States (000 net tons)	12,230	9,226	7,501 (June)
Consumer price index (1967 = 100)			
Detroit area	215.4	248.4	256.7 (June)
United States	216.6	244.9	247.6 (June)
U.S. wholesale price index (1967 = 100)	233.5	263.7	265.2 (June)
Michigan farm prices received index (1967 = 100)	230	227	232 (June)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, First 6 Months: 1979 and 1980

(Thousands of Dollars)

Area	Nonresidential			Residential			Total[a]		
	1979	1980	Percentage change	1979	1980	Percentage change	1979	1980	Percentage change
Ann Arbor	48,482	64,708	+ 35	39,217	24,429	− 38	87,699	89,137	+ 2
Battle Creek	13,017	9,695	− 26	21,683	5,420	− 75	34,700	15,115	− 56
Bay City	4,353	14,187	+326	7,297	12,765	+ 75	11,650	26,952	+231
Detroit	526,779	481,198	− 9	606,328	263,394	− 57	1,133,107	744,592	− 34
Flint	34,579	44,982	+ 30	48,604	15,633	− 68	83,183	60,615	− 27
Grand Rapids	106,605	109,640	+ 3	100,010	71,996	− 28	206,615	181,636	− 12
Jackson	14,177	7,629	− 46	9,177	5,030	− 45	23,354	12,659	− 46
Kalamazoo–Portage	18,568	21,313	+ 15	29,891	19,423	− 35	48,459	40,736	− 16
Lansing–East Lansing	51,251	78,917	+ 54	66,141	39,869	− 40	117,392	118,786	+ 1
Muskegon–Norton Shores–Muskegon Heights	6,237	6,068	− 3	14,858	8,769	− 41	21,095	14,837	− 30
Saginaw	19,920	23,141	+ 16	26,128	10,021	− 62	46,048	33,162	− 28
Michigan	969,261	922,795	− 5	1,237,547	621,272	− 50	2,206,808	1,544,067	− 30
United States	24,727,000	24,775,700	—	38,648,800	26,726,900	− 31	25,436,500	14,957,200	− 41

SOURCE: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1979 and 1980 figures for nonbuilding construction contracts were $544,900,000 and $329,351,000 respectively, or a decrease of 41 percent. U. S. figures for nonbuilding construction contracts were $25,436,500,000 and $14,957,200,000 or a decrease of 41 percent.

Year-to-Year Change in Selected Economic Indicators

Indicator	Second quarter 1979	Percentage change from previous year: 1979 July	August	September	October	November	December	1980 January	February	March	April	May	June
Civilian employment													
United States	+ 2.4	+ 2.8	+ 2.2	+ 2.7	+ 2.1	+ 2.0	+ 2.2	+ 1.8	+ 1.6	+ 1.1	+ .9	+ .5	− .1
Michigan	+ 1.8	+ 3.2	+ 2.9	+ 1.5	+ 1.4	+ 1.4	− .9	− 2.1	− 3.1	− 4.3	− 4.4	− 7.3	− 6.5
Detroit area[a]	− .4	+ 1.5	+ 1.1	− .1	− .4	− .5	− 2.1	− 3.7	− 4.6	− 5.6	− 6.0	− 8.8	− 7.6
Outstate[b]	+ 3.1	+ 4.7	+ 4.6	+ 2.9	+ 3.0	+ 3.1	+ .3	− .6	− 1.8	− 3.0	− 2.9	− 5.9	− 5.5
Wage and salary jobs[c]													
United States	+ 3.6	+ 3.5	+ 3.2	+ 3.1	+ 2.9	+ 2.6	+ 2.4	+ 2.5	+ 2.4	+ 1.6	+ 1.7	+ 1.0	+ .2
Michigan	+ 1.3	+ .3	− 1.2	− 1.4	− 1.3	− 2.2	− 2.3	− 2.9	− 3.5	− 3.8	− 4.9	− 7.0	− 6.7
Detroit area[a]	− .1	− .4	− 2.4	− 2.5	− 2.9	− 3.8	− 3.2	− 3.8	− 4.6	− 4.9	− 6.3	− 8.0	− 7.0
Outstate[b]	+ 2.7	+ 1.0	− .1	− .4	+ .2	− .7	− 1.4	− 2.0	− 2.3	− 2.7	− 3.5	− 6.1	− 6.3
Average workweek[d]													
United States	− 1.7	− .7	− 1.0	− 1.2	− 1.0	− 1.7	− 1.0	− .7	− 1.9	− 2.0	+ 1.3	− 2.0	− 2.5
Michigan	− 5.5	− 4.2	− 4.7	− 6.5	− 7.6	−10.1	− 8.5	− 5.8	− 7.0	− 6.7	+ 6.4	− 6.6	− 5.5
Average weekly earnings[e]													
United States	+ 7.0	+ 7.8	+ 7.2	+ 6.8	+ 6.8	+ 5.5	+ 6.3	+ 6.4	+ 5.9	+ 5.4	+ 9.8	+ 5.4	+ 5.0
Michigan	+ 2.8	+ 4.4	+ 2.5	− 3.9	− 1.1	− 6.3	− 3.4	− .5	− 1.5	− .1	+14.6	− .1	+ 1.6
Motor vehicle assembly													
United States	− 7.5	− 6.2	−28.8	−22.4	−20.1	−31.8	−33.5	−38.2	−33.9	−36.6	−28.5	−50.2	−43.5
Michigan	− 8.1	−13.3	−30.6	−27.8	−46.8	−29.8	−41.1	−40.7	−38.7	−49.7	−40.6	−62.1	−50.9
General Motors	+ 1.6	−14.2	−14.9	−24.2	−52.4	−17.8	−27.6	−24.0	−23.7	−45.0	−36.0	−60.9	−49.3
Ford	− 9.2	+18.2	−28.9	−17.8	−18.2	−28.3	−51.4	−52.7	−49.1	−47.2	−46.7	−54.1	−34.7
Chrysler	−32.7	−41.6	−76.2	−53.6	−62.4	−64.8	−69.1	−77.5	−80.5	−74.0	−54.9	−77.1	−73.7
Steel tonnage poured													
United States	+ 4.2	+ 3.8	− 2.1	− 8.1	−10.7	−14.2	−15.4	− 3.6	− 2.2	− 9.0	−12.6	−27.9	−38.7
Michigan	+14.6	− 1.0	+ .2	−13.8	−20.5	−18.2	−18.9	−16.3	− 7.8	−20.7	−18.7	−42.9	−62.7
Commercial electricity consumption													
United States	+ 4.8	− .2	+ .5	− .6	+ 1.0	+ 2.2	+ .8	− 2.1	− .7				
Michigan	+ 5.9	+ 3.5	+ 1.0	− 5.2	+ 1.0	+ 3.5	+ 2.3	− 2.7	+ .8	+ .2	+ 2.9		
Industrial electricity consumption													
United States	+ 6.0	+ 3.8	+ 2.4	− .1	+ .3	+ .1	− .7	− 1.0	+ 1.1				
Michigan	+ 1.0	+ .5	− 6.3	− 7.6	−10.1	−11.2	−13.2	−16.0	− 9.7	−13.9	−10.1		
Nonresidential construction contracts													
United States	+15	+ 1	+10	− 6	+14	− 6	+18	+10	+12	+ 3	− 5	− 7	+ 6
Michigan	+76	−17	+ 2	−	− 5	+28	− 8	+28	−33	−24	+ 1	+15	+ 8
Residential construction contracts													
United States	− 6	+ 3	− 2	+ 4	− 6	−21	− 9	− 9	− 5	−34	−39	−44	−30
Michigan	+ 6	−10	+24	− 6	−25	−24	−28	−27	−13	−37	−69	−55	−55
Nonbuilding construction contracts													
United States	+23	− 9	−40	−11	−41	− 7	−19	−20	−60	−36	−50	−33	−24
Michigan	+12	−67	−79	−82	+28	−70	−71	−76	−49	+28	−51	−41	−24
Retail sales													
United States	+ 9.5	+ 8.2	+12.6	+ 9.5	+11.2	+10.5	+ 8.3	+12.1	+14.6	+ 3.5	+ 4.9	+ 3.8	
Michigan	+ 9.4	+ 8.1	+ 5.9	+ 4.2	+ 5.2	+ 4.7	+ 5.0	+ 8.9	+ 7.3	− 3.6	− 1.8	− 3.0	
Detroit area[a]	+10.7	+10.9	+ 4.9	+ 3.0	+ 1.5	+ 4.9	+ 5.1	+ 9.6	+ 7.4	− 2.0	+ .1	− 3.7	
Detroit city	+ 1.4	+ 9.3	− 3.0	− 3.2	− 3.5	+ .7	+ 6.4	+20.0	+14.1	+ 4.6	− .7	0	
Suburbs	+12.7	+11.3	+ 6.6	+ 4.3	+ 2.5	+ 5.8	+ 4.8	+ 7.5	+ 6.0	− 3.4	+ .2	− 4.5	
Outstate[b]	+ 8.0	+ 5.0	+ 7.0	+ 5.7	+ 9.7	+ 4.5	+ 4.9	+ 8.0	+ 7.2	− 5.5	− 4.0	− 2.1	
Consumer price index													
United States	+10.7	+11.3	+11.8	+12.1	+12.2	+12.6	+13.3	+13.9	+14.1	+14.7	+14.7	+14.4	+14.3
Detroit[a]	+11.3	+12.8	+13.5	+13.2	+13.1	+14.5	+15.3	+15.7	+15.1	+14.8	+16.4	+16.1	+19.2

SOURCE: Michigan Employment Security Commission, special release; Bureau of Labor Statistics, *The Employment Situation* (monthly); Motor Vehicle Manufacturers Association, special release; American Iron and Steel Institute, special release; Energy Information Administration, special release; F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases (monthly); and Bureau of the Census, *Monthly Retail Trade*.

a. Wayne, Oakland, Macomb, Livingston, Lapeer, and St. Clair counties.
b. Michigan minus Detroit area.
c. The number of wage and salary jobs, except agricultural, reported by employers.
d. Average hours worked by manufacturing production workers.
e. Average earnings among manufacturing production workers.

Quarterly Personal Income in Michigan

	Millions of dollars, annual rates, seasonally adjusted							Percentage change 79(4) to 80(1)	
	1978		1979				1980		
	3	4	1	2	3	4	1	Michigan	United States
TOTAL LABOR AND PROPRIETORS INCOME BY PLACE OF WORK									
By type									
Wage and salary disbursements	53,146	54,858	57,577	56,858	56,548	56,519	57,435	+ 1.6	+ 2.6
Other labor income	6,801	7,038	7,498	7,463	7,423	7,418	7,611	+ 2.6	+ 3.7
Proprietors income	3,517	3,651	3,689	3,828	3,824	3,924	3,769	− 4.0	− 3.1
Farm	519	555	581	745	639	684	562	−17.8	−14.4
Nonfarm	2,998	3,096	3,108	3,082	3,186	3,240	3,206	− 1.0	+ .2
By industry									
Farm	672	714	748	918	813	858	744	−13.3	−10.0
Nonfarm	62,792	64,832	68,015	67,231	66,983	67,002	68,071	+ 1.6	+ 2.5
Private	54,565	56,461	59,574	58,610	58,195	58,087	58,996	+ 1.6	+ 2.7
Ag. Serv., For., Fish., and other	137	141	147	155	161	164	162	− 1.2	− 1.1
Mining	323	338	337	349	359	394	407	+ 3.3	+ 5.0
Construction	3,111	3,199	3,334	3,290	3,348	3,370	3,207	− 4.8	+ 1.2
Manufacturing	27,521	28,803	30,833	29,785	28,562	27,657	28,074	+ 1.5	+ 2.6
Nondurable goods	4,063	4,313	4,429	4,434	4,435	4,418	4,422	+ .1	+ 1.7
Durable goods	23,548	24,491	26,404	25,351	24,127	23,239	23,652	+ 1.8	+ 3.2
Transportation and public utilities	3,464	3,529	3,787	3,775	3,989	4,134	4,149	+ .4	+ 1.5
Wholesale trade	3,215	3,279	3,467	3,613	3,659	3,794	3,885	+ 2.4	+ 3.2
Retail trade	5,564	5,736	5,896	5,912	6,028	6,136	6,271	+ 2.2	+ 2.8
Finance, insurance, and real estate	2,432	2,501	2,615	2,598	2,693	2,787	2,866	+ 2.8	+ 2.8
Services	8,799	8,937	9,159	9,132	9,395	9,651	9,976	+ 3.4	+ 3.4
Government and government enterprises	8,227	8,372	8,441	8,621	8,788	8,915	9,075	+ 1.8	+ 1.6
Federal, civilian	995	1,040	1,072	1,082	1,093	1,126	1,137	+ 1.0	+ 1.2
Federal, military	195	201	199	198	197	207	200	− 3.4	+ .2
State and local	7,037	7,130	7,170	7,341	7,498	7,582	7,737	+ 2.0	+ 1.9
DERIVATION OF PERSONAL INCOME BY PLACE OF RESIDENCE									
Total labor and proprietors income by place of work	63,464	65,546	68,763	68,148	67,796	67,861	68,815	+ 1.4	+ 2.2
Less: Personal contributions for social insurance by place of work	3,062	3,153	3,536	3,449	3,392	3,363	3,497	+ 4.0	+ 4.4
Net labor and proprietors income by place of work	60,401	62,393	65,227	64,700	64,404	64,497	65,317	+ 1.3	+ 2.1
Plus: Residence adjustment	411	426	437	449	461	473	483	+ 2.1	+ 3.2
Net labor and proprietors income by place of residence	60,812	62,819	65,663	65,148	64,865	64,970	65,800	+ 1.3	+ 2.1
Plus: Dividends, interest, and rent	8,974	9,321	9,627	9,882	10,139	10,523	11,062	+ 5.1	+ 5.2
Plus: Transfer payments	9,171	9,280	9,522	9,829	10,456	10,740	11,162	+ 3.9	+ 3.1
State U.I. benefits	443	365	404	462	433	512	646	+26.2	+10.7
Transfers excluding state U.I.	8,728	8,916	9,118	9,368	10,023	10,227	10,516	+ 2.8	+ 2.8
Personal income by place of residence	78,957	81,420	84,812	84,859	85,460	86,233	88,024	+ 2.1	+ 2.6

SOURCE: Bureau of Economic Analysis, special release.

Midyear Review

(Continued from page 3)

Chrysler people working in Michigan than there were in March. Employment is reduced at Chrysler suppliers, too.

Ford's new small cars, the Escort and Mercury Lynx, are assembled in Wayne, Michigan, and Metuchen, New Jersey. Small engines are made in Dearborn, another plus for Michigan.

In spring 1981, General Motors is planning to introduce its replacement for the sporty Monza. The new J-car will likely be assembled in Lordstown, Ohio, since that is where the Monza is produced, but it also means jobs at several Michigan plants that make parts. More important for Michigan, perhaps, is the expansion of the Hydramatic Division. Components plants opened in Three Rivers and Constantine, Michigan, this summer. A Chevrolet parts plant on Mound Road in Detroit also is being converted to Hydramatic parts production.

Tight money will prolong the depression in the residential building industry. There is unlikely to be much improvement before spring 1981. However, office and factory construction will cushion the shock.

Everything considered, although this state's economy should show considerable improvement during the fall quarter, there is almost no chance of it recovering to its 1979 level of employment before the beginning of the 1982 model production run. The earliest likely date for such recovery is December 1981.

In April 1980, the number of individuals receiving payments of one sort or another from the Michigan Department of Social Services exceeded one million for the first time. More than one in every nine of this state's residents now receives some form of public welfare, that is, aid to dependent children, general assistance, emergency assistance, or food stamps. By June, the number was above 1,050,000, a 24 percent gain over the June 1979 figure. It costs roughly $1.5 billion a year to maintain the current level of welfare payments. When Medicaid is included, the bill comes to about $2.5 billion, split about 50–50 between the federal government and Michigan state and local governments. The totals are almost certain to rise in coming months, even as employment increases, because the job gains will be inadequate. Residents will continue to exhaust their unemployment and Trade Adjustment Act (TRA) benefits. Since 1974, the TRA has provided benefits to workers who can demonstrate job loss as a result of imports.

The Longer Term

In the nation and even more so in this state, capital stock has been decaying since before 1974. Thereafter, it has been a victim of high interest rates and high energy prices. Employers have tended to substitute relatively inexpensive and plentiful labor for capital and energy. Consequently, productivity and real earning power of workers have languished. To remedy that, and regardless of the outcome of elections in November, Washington will develop incentives to shift a larger proportion of our national income from consumption to investment.

Michigan's investment boom, interrupted by the recession, will resume because, if for no other reason, new production facilities will be required to downsize cars and small trucks. This state has a tax program that is attractive to a variety of other kinds of private enterprise, and there are ambitious recruitment programs by the Michigan Office of Economic Development and industrial parks throughout the state.

In August 1982, Volkswagen of America will begin production in a Sterling Heights plant now occupied by the U.S. Army. This operation will mean new opportunities for suppliers in the Detroit area. VW itself could build other factories here, perhaps for stampings or trim.

Many jobs will vanish due to downsizing. Smaller engines require fewer valves and piston rings. Electronic fuel injection requires no carburetor. Spare wheels will be outmoded. Some iron foundries, die casters, and stamping plants will fail. In certain segments, Michigan has cost disadvantages that will not diminish. Fashioning mufflers, tail pipes, and shock absorbers, for example, requires low skill labor. Much of this kind of activity has already been lost to southern states, where labor is cheap.

In short, Michigan is likely to hold its own in share of employment devoted to the design and production of motor vehicles, but there will also be a shift to the higher skill and away from the lower skill segments. This all translates into rapidly increasing productivity and wage rates in Michigan for those with jobs.

In addition to motor vehicles, this state is a major producer of large home appliances. That market will benefit from a high rate of new household formation between now and 1985.

Tourism and conventions are expected to provide a major impetus to the state's economy between now and 1985, with lodging employment gaining by almost one-third. Employment in eating and drinking places is forecast to jump by 40 percent, as this industry serves the city-bound leisure crowd as well as tourists and other travelers. Retail trade, banking, and amusements also will feel the effects of rapidly rising discretionary income in single and two-person households. Some segments of health and medical care will grow as a result of the aging population. Business and legal services also are slated for growth.

Durable goods manufacturing is expected to grow, although slowly, through 1984 and then level off. By then, the present wave of automotive investment will have spent itself, implying a declining market for machine tools, among other things. Rail and water transportation and local transit are declining industries in this state. Employment in air transportation and in trucking and warehousing will not increase, although output will, because of productivity gains. Farm employment will continue to decline, but here, too, output will increase as a result of advancing productivity.

A decline in government employment seems inevitable if for no other reason than that those totals include school teachers and faculty and staff in state-owned institutions of higher education. The government totals also are inflated by including most CETA workers. Much of this government job-creation machinery is certain to be dis-

mantled after recovery from the current recession, particularly since the ranks of untrained youth in the labor force are expected to dwindle between now and 1985.

Given this outlook, Michigan can expect to continue to be a labor exporter during the next decade. Our unemployment rate will likely remain above the national average. The state's welfare rolls will remain uncomfortably high, although below current levels.

Michigan's Lodging Industry

(Continued from page 2)

publicized recession have been relatively limited. Rates should continue to rise at a 12 percent to 15 percent rate, although general increases will be less common as demand softens.

New building activity is still relatively strong in most major markets. Several factors have caused this. The favorable tax status enjoyed by real estate has been significant. Many equity syndications are being undertaken, and institutional investors are being attracted to the lodging industry. Foreign money has been coming into the state, attracted by the political stability of the United States, favorable exchange rates, and the basic soundness of the lodging industry.

Considerable development activity is centered in the state's second-tier metropolitan areas, such as Grand Rapids, Lansing, and Flint. However, due to increasing group demand and obsolescence of some properties, opportunities exist in virtually every market. To encourage development, local governments are offering financial incentives, including assistance in acquiring land, Economic Development Corporation mortgages, partial property tax abatement, Urban Development Action Grants (through the U.S. Department of Housing and Urban Development), and administrative assistance. The last item, which basically means help in circumventing red tape, can be critical, especially since many impediments have been erected by zoning and planning officials, as well as environmental groups. In general, the public and private sectors appear to be learning that it is in their mutual best interest to cooperate.

The limitations on development are the continuing increases in construction costs and lenders' attitudes. Lenders, particularly life insurance companies, have been hard hit by the Federal Reserve's efforts to control inflation and the money supply. Many companies have had to make low interest loans to policyholders, thereby limiting the funds available for development. Lenders are approaching new ventures cautiously. As a result, worthy projects are having a difficult time getting commitments.

There are several other problems. Overall occupancy rates are limited in most major markets by the relatively low level of weekend demand. Michigan has not yet attracted significant urban tourism, which aids weekend occupancy in other markets. The continuing escalation of energy and labor costs is causing difficulty. Also, there is concern about the effect of gasoline shortages on the industry. However, the future still looks promising for the lodging industry, barring cataclysmic economic events.

RETAIL TRADE: ADDENDUM

The April issue on retail trade was prepared before the special report on major retail centers was received. Since it, along with a similar report for 1977, contains data of considerable interest to students of urban economics, some of the highlights are presented here.

A central business district (CBD) is the downtown business area of a central city of a Standard Metropolitan Statistical Area or another city of 50,000 or more in an SMSA. There are 13 CBDs in Michigan; the one in which retail sales grew most rapidly between 1972 and 1977 was Muskegon. That city has a new downtown mall. East Lansing had the second most rapid retail sales growth in its CBD, followed by Ann Arbor and Battle Creek. For Kalamazoo, 1972 data are not available.

The CBDs in Saginaw, Grand Rapids, and Bay City grew little; those in Lansing and Saginaw declined somewhat; and those in Flint and Detroit declined sharply. For Pontiac, the 1972 figures are not available. If they were, they would undoubtedly reveal an even sharper contraction than occurred in Detroit in the volume of business conducted downtown.

In the Detroit CBD, sales at eating places increased by almost 60 percent, compared with 26 percent in the rest of the city. Sales at bars and taverns declined by more than 20 percent both in the CBD and the rest of Detroit. Florists, grocers, and service stations made modest sales gains in the CBD; home furnishings stores posted a 54 percent increase.

Eating places in the Flint CBD experienced a moderate gain (18 percent), whereas drinking places' sales jumped by 73 percent. Sales at food stores were up 10 percent, at service stations, 25 percent.

Grand Rapids CBD bar and restaurant owners witnessed declines in sales, the former by 29 percent, the latter by 19 percent.

Lansing's restaurants in the CBD reported a 15 percent increase in sales.

In Ann Arbor, CBD restaurant sales were up 119 percent, bar and taverns up 48 percent.

The Bay City CBD had an 85 percent increase in restaurant sales, a 14 percent decrease in drinking place sales, and a 95 percent increase in gasoline service station sales.

THE MICHIGAN STATE ECONOMIC RECORD
DIVISION OF RESEARCH
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION
MICHIGAN STATE UNIVERSITY
BERKEY HALL
EAST LANSING, MICHIGAN 48824

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10/13/82

THE
MICHIGAN
STATE
ECONOMIC
RECORD

(ISSN: 0026-2455)

A MONTHLY REPORT
ON BUSINESS CONDITIONS
IN MICHIGAN

Volume 22 *No. 8*
SEPTEMBER 1980

Published by the
Division of Research
Graduate School of
Business Administration
Berkey Hall

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Michigan State University

Michigan
State
University

EAST LANSING
MICHIGAN 48824

Published monthly, except July and August, when bimonthly. Second class postage paid at East Lansing, Michigan. Distributed on request to residents of the State of Michigan.
Permission to reprint granted upon written request.

CENSUS OF SELECTED SERVICE INDUSTRIES

by DAVID I. VERWAY, *Research Professor, Division of Research, Graduate School of Business Administration, Michigan State University*

Michigan ranked behind California and New York in the dollar volume of business done by independent, commercial research and development laboratories during 1977, according to the most recent Census of Selected Service Industries published by the Bureau of the Census. The Michigan proportion of the U.S. total was just under 10 percent (Table 1). The figure for California was 27 percent, and for New York, 12 percent. Massachusetts ranked fourth with 9 percent of receipts by commercial establishments primarily engaged in laboratory or other physical research and development on a contract or fee basis. This category excludes testing laboratories but does include independent agricultural research, chemical laboratories, development of computer and related technology, engineering research, food research, and industrial laboratories.

Other service industries in which Michigan's share of national activity is relatively high are passenger car leasing, utility and recreational vehicle rental, packaging and labeling service, bowling alleys, nonmunicipal public golf courses, muffler shops, car washes and automotive services other than repair, automotive glass replacement and repair, and lawnmower, saw, knife, and tool sharpening and repair. Clearly, service industries associated with the automobile are in comparatively heavy demand in this state.

Services in which Michigan is relatively lacking include commercial museums, botanical and zoological gardens, motion picture and tape production for television, amusement parks, carnivals and circuses, producers of legitimate theater, carpet and upholstery cleaning, services allied to motion picture production, interior designing, disinfecting and exterminating, and laundry and garment care. California and New York dominate the performing arts and Michigan is far down on the list of states in this area. However, Detroit is a center for commercial photography, art, and graphics, and for advertising agencies, because of promotional activities of the automobile companies.

CENSUS OF SELECTED SERVICE INDUSTRIES

In spring 1978, all large and medium size businesses in this country, and those known to operate more than one establishment, regardless of size, were queried by the Bureau of the Census. Small firms were either included in a sample or their 1977 operating statistics were developed from administrative records at the Social Security Administration and the Internal Revenue Service.

Selected service industries include establishments subject to the federal income tax that provide lodging, personal, business, automotive, miscellaneous repair, amusement, legal, engineering and architectural, and surveying services. Dental laboratories also are included, but other health providers (dentists, physicians, hospitals, and so forth) are not. Also excluded are educational services, social services, membership organizations (including religious), accountants and bookkeepers, private households, and noncommercial museums, art galleries, and botanical and zoological gardens.

Each establishment was classified on the basis of its major activity. For example, a place where men's hair is cut is a barber shop even though

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TABLE 1
Comparative Michigan Selected Service Industry Statistics: 1972 and 1977

Kind of business	Michigan receipts as a percentage of U.S. receipts		Michigan, number of establishments		Michigan receipts ($000,000)		Percentage increase in receipts 1972–1977		Michigan, mid-March employment	
	1972	1977	1972	1977	1972	1977	Michigan	U.S.	1972	1977
Passenger car leasing	n.a.	10.7	57	57	25.1	138.6	452.2	n.a.	216	417
Commercial research & development labs	n.a.	9.8	n.a.	62	n.a.	197.9	n.a.	n.a.	n.a.	2,168
Utility & recreational vehicle rental	n.a.	9.7	32	28	2.0	5.4	170.0	n.a.	69	69
Packaging & labeling service	n.a.	8.5	35	37	17.4	32.5	86.8	n.a.	682	883
Bowling alleys	8.8	8.4	794	467	95.4	138.1	44.9	51.2	6,673	8,928
Public golf course, exc. municipal	7.5	8.0	194	210	19.3	32.8	69.5	59.4	483	587
Exhaust system service (muffler shops)	6.8	7.5	68	104	11.7	27.4	135.1	115.0	240	503
Automotive services, except repair	7.3	7.2	1,056	1,155	54.9	100.0	82.2	84.9	4,128	4,030
Glass replacement & repair	7.0	6.4	115	120	18.8	28.8	53.3	69.6	574	700
Lawnmower, saw, knife, tool sharpening & repair	6.2	6.2	66	58	6.2	9.8	57.1	55.9	242	288
Diaper service	n.a.	6.1	11	9	2.2	4.2	90.9	n.a.	134	139
Commercial photography, art, & graphics	5.0	5.9	224	283	44.5	101.5	128.3	95.0	1,696	2,367
Concession operators of amusement devices, rides	6.4	5.9	36	38	7.2	9.6	32.9	44.6	187	120
Advertising agencies	9.1	5.3	223	233	112.5	167.3	48.7	73.0	3,755	3,607
Window cleaning	6.9	5.3	76	60	4.9	4.1	− 16.8	8.2	503	282
Welding repair	4.6	5.3	159	179	17.1	37.7	121.3	92.6	685	1,112
Sign painting shops	3.7	5.2	59	39	3.9	6.9	78.6	26.5	159	209
Top & body repair shops	4.8	5.1	1,190	1,425	85.9	202.4	135.6	84.3	3,190	4,744
Paint shops	4.9	5.1	109	129	11.3	22.4	97.4	87.7	464	656
Radiator repair	3.8	5.1	66	78	5.9	14.4	142.4	80.9	247	335
Coin-operated laundries & dry cleaning	4.6	5.0	1,119	834	40.1	53.9	34.4	23.2	2,782	2,438
Motion picture production, except for TV	n.a.	4.8	26	30	12.9	25.2	n.a.	n.a.	280	317
Industrial laundries	5.5	4.6	62	50	42.8	53.3	24.7	46.7	2,662	2,152
Linen supply	4.3	4.6	52	55	40.2	57.7	43.4	34.6	2,643	2,170
Blueprinting & photocopying services	4.3	4.6	56	84	9.7	18.2	88.5	74.9	435	518
Transmission repair shops	4.9	4.6	109	215	10.5	30.3	187.4	202.8	390	812
Watch, clock, & jewelry repair	4.7	4.6	54	60	4.2	7.2	70.3	76.0	158	169
Racing, including track operation	6.0	4.6	109	70	60.2	71.7	19.2	54.0	883	747
Power laundries, family & commercial	3.2	4.5	105	94	21.4	27.3	27.2	− 8.6	2,220	1,661
Barber shops	4.7	4.5	3,880	2,747	41.2	44.7	8.5	12.1	934	765
Funeral service & crematories	4.4	4.4	777	770	98.5	125.0	26.9	27.4	2,877	2,774
Stenographic services	3.0	4.3	86	120	7.3	16.1	119.5	85.5	517	714
Temporary help supply services	3.5	4.3	113	179	31.6	99.9	215.7	153.1	6,016	12,674
Auto electrical & fuel system service	4.3	4.3	63	75	5.8	10.8	86.4	86.4	223	298
Dental laboratories	4.1	4.3	336	389	23.6	40.8	73.0	65.4	1,113	1,367
Sporting & recreational camps	3.8	4.2	500	356	10.1	11.7	15.8	NC	522	356
Photographic studios, portrait	4.4	4.2	1,166	1,286	33.6	47.4	41.2	54.3	1,460	1,150
Detective agencies & protective services	4.3	4.2	251	269	61.4	110.3	79.5	84.3	9,543	12,441
Truck rental	n.a.	4.2	37	53	23.1	33.8	46.3	n.a.	338	366
Drive-in theaters	4.1	4.2	106	103	16.8	18.4	9.3	6.5	909	417
Dry cleaning plants	4.3	4.1	1,151	831	25.7	78.0	3.0	7.7	7,607	5,195
Hotels, fewer than 25 rooms	3.6	4.0	136	145	6.6	7.5	13.3	3.0	501	402
Beauty shops	4.3	4.0	6,784	6,780	128.7	170.8	32.7	41.3	11,775	11,354
Outdoor advertising services	3.0	4.0	43	28	12.3	21.4	74.3	29.9	506	423
Brake, front end & wheel alignment	3.1	4.0	81	79	7.5	15.4	106.2	59.2	287	390
Misc. personal service	4.0	3.9	1,969	2,957	45.4	80.9	78.4	22.6	3,789	5,226
Membership sports & recreation clubs	n.a.	3.9	n.a.	195	n.a.	45.3	n.a.	n.a.	n.a.	1,910
Adjustment & collection agencies	2.0	3.7	173	162	16.2	24.5	51.2	n.a.	1,063	1,243
Armature rewinding shops	4.0	3.7	90	90	24.2	47.3	95.3	108.7	810	1,011
Direct mail advertising services	3.5	3.6	81	65	18.5	30.3	63.7	56.8	1,507	1,032
Photo finishing laboratories	2.6	3.6	63	83	30.8	67.1	118.0	60.7	1,181	1,911
Sewer & septic tank cleaning services	5.5	3.6	68	53	6.7	7.8	15.2	75.4	210	198
Engineering, architectural, & surveying services	3.9	3.6	2,207	2,405	298.3	527.8	76.9	94.2	12,542	14,043
Radio & TV repair shops	3.8	3.5	1,255	1,119	31.5	43.3	33.3	43.8	1,259	1,327
Motion picture theaters	3.4	3.5	256	238	48.2	74.3	54.2	51.9	3,572	3,148
Refrigeration & air conditioning shops	2.6	3.4	88	89	7.8	18.8	139.2	81.6	250	404
Reupholstery & furniture repair	5.2	3.4	781	754	11.8	17.1	39.1	54.3	659	706
Radio, TV, & publisher's advertising	2.4	3.3	44	49	7.6	14.6	91.7	43.8	219	249

TABLE 1 (Cont.)
Comparative Michigan Selected Service Industry Statistics: 1972 and 1977

Kind of business	Michigan receipts as a percentage of U.S. receipts		Michigan, number of establishments		Michigan receipts ($000,000)		Percentage increase in receipts 1972-1977		Michigan, mid-March employment	
	1972	1977	1972	1977	1972	1977	Michigan	U.S.	1972	1977
Truck leasing, exc. finance leasing	n.a.	3.3	76	91	49.1	76.5	55.8	n.a.	620	720
Electrical & electronic repair shops	3.4	3.3	134	186	19.9	41.8	109.9	114.6	911	1,247
Legal services	3.8	3.3	4,723	5,562	409.8	622.8	52.0	70.9	9,342	13,312
Water softening services	n.a.	3.2	82	86	13.4	17.3	29.1	n.a.	536	467
Diesel repair shops	2.8	3.2	40	63	6.2	19.4	210.9	170.2	273	414
Dance halls, studios, & schools	2.6	3.1	76	95	2.3	5.1	131.5	75.0	316	467
Trailer parks & campsites for transients	3.4	3.1	447	404	9.7	14.0	44.3	60.7	129	92
Cleaning & maintenance services	3.5	3.1	728	737	61.0	98.2	60.9	86.9	9,752	11,358
Telephone answering services	2.8	3.1	67	76	5.7	11.3	98.4	80.7	659	867
General automotive repair shops, exc. diesel	3.3	3.1	775	879	76.7	123.2	60.6	72.0	2,663	3,297
Theatrical services	2.2	3.1	35	33	5.8	14.7	155.6	87.4	111	209
Billiards & pool establishments	5.0	3.1	316	83	5.7	3.8	− 34.4	5.5	215	203
Professional sports clubs, managers, promoters	3.4	3.1	18	19	17.4	29.2	68.1	82.7	376	642
Parking lots	3.2	3.0	304	209	13.3	16.0	20.1	27.4	835	629
Consumer credit reporting agencies	n.a.	2.9	42	43	8.9	9.6	7.9	n.a.	814	536
Shoe repair, shoe shine, & hat cleaning shops	2.9	2.8	365	242	6.1	6.7	8.7	13.6	246	180
Coin-operated amusement devices	2.3	2.8	61	78	7.0	13.8	98.0	63.7	235	383
Computer & data processing services	2.3	2.7	274	499	80.4	204.4	152.8	120.2	3,457	5,890
Commercial testing labs	1.6	2.7	48	64	6.1	18.8	208.6	74.6	279	522
Motels, motor hotels, & tourist courts	3.1	2.5	1,945	1,549	164.0	202.0	23.2	48.0	11,170	10,451
Tire retreading & repair shops	2.1	2.5	55	54	10.0	17.8	78.0	46.2	307	399
Management & consulting services	2.4	2.4	483	636	78.1	147.4	99.0	87.5	3,230	5,536
Farm machinery & equipment repair shops	2.3	2.4	16	21	1.7	3.3	89.5	78.6	72	81
Garment pressing	3.5	2.3	137	57	6.3	3.0	− 57.7	− 27.4	483	196
Commercial recreational amusements	2.1	2.3	386	362	26.0	47.9	84.3	76.0	1,753	2,999
Hotels, 25 rooms or more	1.9	2.2	232	220	86.2	216.0	150.7	111.5	6,792	13,487
Employment agencies	4.2	2.2	176	184	21.2	20.5	− 3.3	84.2	1,433	1,012
Parking structures	2.9	2.2	20	26	8.4	10.0	17.7	57.0	250	277
Public relation services	2.4	2.1	53	64	6.8	10.1	88.7	67.2	221	276
Motion picture film exchanges	n.a.	2.1	20	23	20.8	43.6	109.6	n.a.	177	127
Equipment rental & leasing services	4.9	2.0	664	878	109.6	164.2	48.6	115.3	1,958	2,435
Passenger car leasing, exc. finance leasing	n.a.	2.0	68	62	21.9	37.1	69.4	n.a.	579	685
Laundry & garment services	n.a.	1.9	n.a.	32	n.a.	2.0	n.a.	n.a.	n.a.	127
Disinfecting & exterminating services	1.5	1.4	61	78	7.5	12.7	69.2	78.2	549	557
Interior designing	4.5	1.3	43	34	10.8	4.8	− 55.8	47.1	270	123
Service allied to motion picture production	n.a.	1.3	15	14	6.4	9.7	51.6	n.a.	172	199
Carpet & upholstery cleaning	3.3	1.2	133	138	5.8	9.0	57.0	57.5	764	511
Carnivals, circuses, & fairs	2.8	.9	36	10	4.5	1.8	− 59.1	22.5	56	10
Producers of legitimate theater	n.a.	.7	n.a.	17	n.a.	2.1	n.a.	n.a.	n.a.	57
Amusement parks	.7	.5	18	25	3.0	5.6	85.3	150.7	72	92
Motion picture & tape production for TV	n.a.	.2	n.a.	9	n.a.	2.2	n.a.	n.a.	n.a.	37
Commercial museums, botanical & zoological gardens	n.a.	.1	n.a.	8	n.a.	—	n.a.	n.a.	n.a.	12
Total[a]	3.6	3.6	56,080	60,550	3,783.7	6,388.8	68.8	70.3	186,018	218,851

SOURCE: Bureau of the Census, *1977 Census of Selected Service Industries, Geographic Area Series, Michigan* (Washington, D.C.: 1979), SC77-A-23, Table 1; *1972 Census of Selected Service Industries, Geographic Area Series, Michigan* (Washington, D.C.: 1974), SC72-A-23; and similiar documents for the United States.
a. Includes items for which separate industry data were not available.
n.a. not available.

it might also be a retailer of shampoo, combs, and hairbrushes.

Receipts include payments received from customers for services rendered and for merchandise sold during 1977. Employment includes full- and part-time workers who were at their jobs or were on paid holiday, vacation, or sick leave during the pay period including 12 March 1977. Employment does not include proprietors and partners in unincorporated businesses.

Nevada, Hawaii, and New York are the top ranked states in the relative importance of selected service industries as a group. If the District of Columbia were a state, it would rank second. Mississippi, West Virginia, and Indiana are at the bottom of the list. Michigan tied with Oklahoma for 34th place in 1977. In 1972, Michigan was 27th in selected services receipts as a percentage of personal income. (Economic censuses are conducted twice each decade.)

In number of inhabitants per selected service establishment, Michigan ranked fourth in 1977 and 1972. States where these establishments are distributed more thinly

(Continued on page 6)

The MICHIGAN STATE ECONOMIC RECORD

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	41.1	39.5	39.3 (July)
Average weekly hours, U.S.	39.9	39.4	38.9 (July)
Average hourly earnings, Michigan ($)	8.79	9.35	9.32 (July)
Average hourly earnings, U.S. ($)	6.72	7.20	7.28 (July)
U.S. motor vehicle production (units)	796,470	634,968	507,386 (July)
Michigan electricity usage (mil. kwh.)	5,799	5,917	5,698 (Apr.)
Industrial (mil. kwh.)	2,729	2,550	2,453 (Apr.)
Residential (mil. kwh.)	1,741	1,950	1,806 (Apr.)
Raw steel production:			
Michigan (000 net tons)	968	365	437 (July)
United States (000 net tons)	11,821	7,501	6,796 (July)
Consumer price index (1967 = 100)			
Detroit area	219.5	256.7	253.7 (July)
United States	218.9	247.6	247.8 (July)
U.S. wholesale price index (1967 = 100)	236.9	265.2	269.8 (July)
Michigan farm prices received index (1967 = 100)	233	233	240 (July)

Sources: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, First 7 Months: 1979 and 1980

(Thousands of Dollars)

Area	Nonresidential 1979	Nonresidential 1980	Nonresidential Percentage change	Residential 1979	Residential 1980	Residential Percentage change	Total[a] 1979	Total[a] 1980	Total[a] Percentage change
Ann Arbor	52,706	68,847	+ 31	47,800	30,938	− 35	100,508	99,785	− 7
Battle Creek	16,192	17,451	+ 8	23,866	8,187	− 66	40,058	25,638	− 36
Bay City	5,426	14,960	+175	8,786	13,640	+ 55	14,212	28,600	+101
Detroit	603,427	557,804	− 8	690,205	312,593	− 55	1,293,632	870,397	− 33
Flint	37,234	51,558	+ 38	57,098	20,472	− 64	94,332	72,030	− 24
Grand Rapids	128,130	126,641	− 1	114,079	86,171	− 24	242,209	212,812	− 12
Jackson	14,463	36,607	+153	10,688	5,894	− 45	25,151	42,501	+ 69
Kalamazoo–Portage	23,492	23,768	+ 1	40,494	23,214	− 43	63,986	46,982	− 27
Lansing–East Lansing	52,338	86,052	+ 64	98,844	49,412	− 50	151,182	135,464	− 10
Muskegon–Norton Shores–Muskegon Heights	12,356	8,436	− 32	17,344	17,529	+ 1	29,700	25,965	− 13
Saginaw	22,271	24,341	+ 9	33,761	12,723	− 62	56,032	37,064	− 34
Michigan	1,105,946	1,090,370	− 1	1,476,980	772,260	− 48	2,582,926	1,862,630	− 28
United States	29,294,400	29,594,400	+ 1	45,530,900	32,832,300	− 27	74,825,300	62,426,700	− 17

Source: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

Note: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1979 and 1980 figures for nonbuilding construction contracts were $630,976,000 and $390,107,000 respectively, or a decrease of 38 percent. U.S. figures for nonbuilding construction contracts were $29,762,300,000 and $15,136,800,000 or a decrease of 49 percent.

Quarterly Motor Vehicle Employment and Assembly

Item	1977 4	1978 1	1978 2	1978 3	1978 4	1979 1	1979 2	1979 3	1979 4	1980 1	1980 2
EMPLOYMENT[a]											
Checker											
Michigan	1,166	1,117	1,118	1,084	1,140	1,207	1,194	1,182	1,099	982	803
Chrysler											
Michigan	84,047	78,744	82,799	75,187	81,664	75,316	70,238	58,182	55,456	47,273	43,235
United States	137,286	131,066	136,158	125,989	135,997	125,899	118,532	99,754	98,228	86,341	78,908
Ford[b]											
Michigan	124,098	124,187	127,148	126,300	135,377	132,298	129,526	117,630	111,790	104,321	92,458
United States	233,911	224,635	239,517	233,314	253,536	245,253	240,054	211,763	196,038	181,595	160,226
General Motors											
Michigan	280,000	264,000	278,000	267,000	289,000	295,000	296,000	291,000	288,000	267,000	237,000
United States	624,000	588,000	619,000	594,000	643,000	644,000	650,000	582,000	602,000	561,000	499,000
ASSEMBLY											
Dearborn	37,107	40,230	70,007	39,072	83,017	96,572	92,774	85,970	68,819	65,971	70,823
Detroit	126,739	130,969	140,723	54,857[c]	89,563[c]	130,475[c]	113,866[c]	56,399[c]	78,055	57,044R	40,016
Detroit (truck)	7,577	7,587	11,443	11,142	30,753[c]	33,693[c]	28,503[c]	12,861[c]	16,534	14,812R	5,865
Flint	100,181	93,380	104,042	76,157	109,192	115,405	110,135	56,914	90,222	69,179	65,568
Flint (truck)	103,976	107,414	116,436	103,549	104,839	114,846	95,075	60,985	75,541	70,123	19,975
Hamtramck	72,429	56,098	86,545	56,808	54,230	44,901	62,806	15,345	30,134	1,031[c]	c
Kalamazoo	1,095	1,361	1,036	809	1,019	1,134	1,268	1,203	1,161	770	810
Lansing	99,322	93,080	110,381	62,327	116,726	130,644	130,363	72,684	96,143	104,913	82,558
Pontiac	83,219	75,104	87,334	61,666	82,652	91,712	85,977	46,578	61,082	50,974	30,102
Pontiac (bus & truck)	40,474	55,041	67,569	61,741	72,398	77,144	73,922	51,628	42,135	33,850	24,376
Warren (bus & truck)	70,738	76,322	94,415	72,181	84,504	76,365	48,873	5,027	19,043	14,783R	28,537
Wayne	67,939	76,242	76,599	63,214	55,607	50,477	46,765	34,081	28,800	27,840	37,401
Wayne (truck)	50,706	53,462	56,436	48,390	52,388	56,052	51,994	21,305	34,256	25,355	7,751
Wixom	43,677	42,915	47,639	36,508	46,902	51,132	36,527	20,013	32,604	8,724	6,896
Ypsilanti	62,270	60,220	73,733	57,178	38,891	38,797	75,420	73,508	70,507	84,598	83,147
Total Michigan											
Passenger car	693,978	669,599	798,039	508,596	654,346	751,250	755,901	462,695	537,527	471,044R	417,321
Bus and truck	273,471	299,826	341,141	297,003	368,325	358,100	298,367	151,806	187,509	158,923R	86,504
Total United States											
Passenger car	2,306,400	2,267,474	2,656,507	1,850,701	2,398,411	2,411,307	2,482,907	1,655,546	1,884,756	1,783,732	1,632,826
Bus and truck	850,989	865,427	1,019,266	851,996	982,232	1,024,655	916,996	529,092	564,118	499,525	350,607
Total Canada											
Passenger car	282,256	289,695	345,842	229,593	297,157	307,823	281,806	171,427	227,966	225,969	228,428
Bus and truck	171,998	171,127	185,031	120,199	180,355	200,162	190,698	107,988	135,532	146,015	136,314

SOURCE: Ward's *Automotive Reports;* Motor Vehicle Manufacturers Association of the United States, Inc., P-I report; and companies.

a. Average monthly wage and salary employment of companies with assembly plants in Michigan; includes nonautomotive.

b. Excludes Ford Aerospace and Communications Corporation and finance and insurance subsidiaries.

c. Chrysler's Jefferson Avenue plant has been converted to truck production. The plant had no production during July and August and began assembling trucks during the latter part of September. The Hamtramck plant closed 4 January 1980.

R. revised.

Census of Selected Service Industries

(Continued from page 3)

among the population are Alabama, Mississippi, and West Virginia. The frequency is greatest in the District of Columbia, Nevada, and Wyoming.

Receipts per establishment were highest in Nevada, the District of Columbia, and Hawaii. They were lowest in South Dakota, Maine, and Montana. Michigan ranked tenth.

KIND OF BUSINESS

There are more beauty shops than any other kind of service establishment in both Michigan and the nation. However, the growth of receipts for this industry was well below the overall average between 1972 and 1977. Second and third most numerous were legal services and barber shops. Barbering is a very slow-growth industry in terms of receipts; the number of shops has dropped sharply. Growth in the legal professions matched that for services overall nationally but was below the average in this state. The number of law offices rose both here and nationally. In total receipts, legal services is the largest of the selected service industries.

Fastest growing of the selected service industries here were most categories of automotive repair, automotive leasing, computer and data processing services, commercial testing laboratories, management and consulting services, theatrical services, stenographic services, temporary help supply services, large hotels, nonautomotive welding services, commercial photography, art and graphics, photofinishing laboratories, refrigerator and air conditioning repair shops, coin-operated amusement devices, and telephone answering services. Declining service industries were carnivals, circuses, and fairs, interior designing, employment agencies, garment pressing, billiard and pool halls, and window cleaners. If the dollar figures in Table 1 could be adjusted for increases due only to prices, they would reveal a number of other service industries whose real output has declined.

Industries consisting predominantly of small businesses are dance studios, pool halls, reupholstery shops, parking lots, window cleaning, shoe repair shops, barber shops, beauty shops, carpet cleaners, pressing shops, dry cleaning plants, coin-operated laundries, sporting and recreational camps, trailer parks, and small hotels. Among these, only dance studios experienced above average growth.

Repair services on the whole, both automotive and other, experienced above average growth. Many industries in this broad category also have relatively small establishments, although not as small as those listed in the preceding paragraph. Repair services seem to offer the best opportunity for people interested in operating a small business.

The group including business services has relatively few small establishments in comparison with other service-type industries and is the fastest growing.

Clearly, the trend in services is toward larger size. It should be mentioned, however, that even in what is perhaps the most concentrated of the service industries, commercial research and development laboratories, the average establishment is far smaller than, say, the typical department store. In other words, small size still is typical of service industries as a group.

EMPLOYMENT OPPORTUNITIES

Automotive repair shops of all kinds experienced comparatively greater employment growth than all of the selected service industries taken together, themselves among the rapid-growth sectors of Michigan's and the nation's economy. Automotive repair also offers better than average paying jobs; average earnings were $11,556 in 1977 compared with $9,409 for all selected service industries. (See Table 2.) Welding, refrigeration and air conditioning repair, electrical repair, and armature rewinding also had above average growth and earnings.

Among business services, Michigan job growth and earnings were best in computer and data processing services, commercial photography, commercial research and development laboratories, commercial testing laboratories,

TABLE 2
Payroll per Employee and Employment Growth in Selected Service Industries, Michigan and the United States: 1972–1977

	Payroll per employee, 1977		*Employment growth, 1972–1977*	
Kind of business	*Michigan*	*United States*	*Michigan*	*United States*
Hotels, motels, trailer parks, and camps, total	$5,076	$5,663	29.7	24.7
Personal services, total	6,490	6,016	−10.5	− 6.8
Advertising	17,059	16,169	− 4.7	− 6.5
Services to dwellings and other buildings	5,045	5,291	12.9	27.8
Computer and data processing services	12,889	13,898	70.4	59.9
Management and consulting services	11,416	13,502	71.4	47.5
Public relations services	15,170	15,101	24.9	22.2
Equipment rental and leasing services	15,323	12,460	24.4	43.4
Direct mail advertising services	9,468	8,752	−31.5	− 5.4
Blueprinting and photocopying services	9,938	9,221	19.1	11.0
Stenographic and reproduction services	10,497	8,822	38.1	28.1
Commercial photography, art, and graphics	16,217	12,783	39.6	31.2
Employment agencies	10,228	8,537	−29.4	44.5
Temporary help supply services	5,675	5,138	110.7	85.0
Commercial research and development laboratories	24,099	17,374	119.9	n.a.
Commercial testing laboratories	15,036	12,199	87.1	12.2
Detective agencies and protective services	5,729	5,708	30.4	32.1
Photofinishing laboratories	10,154	8,128	61.8	44.8
Sign painting shops	11,617	9,182	31.4	−12.0
Interior designing	8,602	11,541	−54.4	9.5
Telephone answering services	6,276	5,305	31.6	25.6
Business services, total	9,432	9,076	34.2	30.6
Automotive repair shops	11,556	9,769	43.4	33.0
Automotive rental and leasing	13,118	11,053	23.9	20.4
Automobile parking	6,036	6,238	−16.5	− 9.2
Other automotive services	6,387	5,566	− 2.4	5.3
Automotive repair, services, and garages, total	10,445	9,222	25.3	23.1

TABLE 2 (Cont.)
Payroll per Employee and Employment Growth in Selected Service Industries, Michigan and the United States: 1972–1977

Kind of business	Payroll per employee, 1977		Employment growth, 1972–1977	
	Michigan	United States	Michigan	United States
Radio and television repair shops	10,038	9,096	5.4	5.9
Refrigeration and air conditioning repair shops	13,463	11,982	61.6	31.6
Electrical and electronic repair shops	11,744	11,409	36.9	31.9
Reupholstery and furniture repair shops	7,370	7,110	7.1	15.9
Watch, clock, and jewelry repair	8,166	8,112	7.0	35.5
Welding repair	12,076	10,479	62.3	38.1
Armature rewinding shops	15,314	13,622	24.8	33.5
Farm machinery and equipment repair shops	12,012	9,163	12.5	23.0
Lawnmower, saw, knife, and tool sharpening and repair	10,285	9,374	19.0	18.6
Sewer and septic tank cleaning services	13,793	11,357	− 5.7	38.3
Miscellaneous repair services, total	11,743	10,717	28.3	36.0
Motion picture production, distribution, and services	16,846	15,578	−20.2	36.7
Motion picture theaters	3,992	4,036	−11.9	− 8.3
Drive-in motion picture theaters	7,547	4,517	−54.1	−26.5
Theatrical services	15,134	12,071	88.3	12.4
Billiards and pool establishments	3,764	4,116	− 5.6	−21.0
Bowling alleys	4,231	4,555	33.8	16.5
Dance halls, studios, and schools	3,861	3,853	47.8	40.4
Professional sports clubs, managers, and promoters	21,731	24,919	70.7	1.2
Racing, including track operations	19,406	9,059	−15.4	14.8
Public golf courses, exc. municipal	15,317	8,051	21.5	20.4
Coin-operated amusement devices	8,021	7,983	63.0	42.9
Amusement parks	16,848	9,527	27.8	81.5
Concession operators of amusement devices and rides	11,367	8,323	−35.8	13.0
Carnivals, circuses, and fairs	26,063	8,425	−71.4	−28.5
Amusement and recreation services, total	6,535	7,984	− 1.7	1.1
Dental laboratories, total	11,406	10,296	22.8	19.4
Legal services, total	15,943	13,307	42.5	46.5
Engineering, architectural, and surveying services, total	19,422	16,862	12.8	27.5
SELECTED SERVICES, TOTAL	9,409	8,845	17.7	19.5

SOURCE: Bureau of the Census, *1977 Census of Selected Service Industries, Geographic Area Series, Michigan* (Washington, D.C.: 1979), SC77-A-23, Table 3; and *1972 Census of Selected Service Industries, Area Statistics, United States* (Washington, D.C.: 1980), SC77-A-52, Table 3.

sign painting shops, public relations, and management and consulting services.

Dental laboratories, law firms, professional sports, public golf courses, and theatrical services also experienced above average employment growth and pay levels.

Large hotels, temporary help supply services (such as Kelly Girl and Manpower), detective agencies, telephone answering services, photofinishing laboratories, dance halls, and bowling alleys added many workers, but at comparatively low pay.

Small lodging establishments, motion picture theaters and distributors, car washes, parking lots, interior designing, and personal services exhibited both employment declines and low pay. Personal services include barber and beauty shops, undertakers, photographic (portrait) studios, garment services such as dry cleaning and laundering, and so forth.

COUNTY RANKINGS

Mackinac, Emmet, and Otsego counties are tourist oriented, with a heavy emphasis on lodging. That is why they are the top three counties in Michigan in the relative importance of selected service industries. Oakland owes its fourth place to its many business services. Grand Traverse is both a tourist-convention center and the business hub of northern Michigan. Services are a major underpinning, and they are well diversified. Jackson is relatively high ranking because it hosts Commonwealth Associates, a nuclear power engineering and consulting firm.

Adjusted for population, selected service establishments are most plentiful in Roscommon, Mackinac, Emmet, Grand Traverse, Cheboygan, Montmorency, Otsego, Leelanau, Benzie, and Crawford counties. Selected service establishments are smallest in size, on average, in Oscoda, Montmorency, Keweenaw, Newaygo, Roscommon, Presque Isle, Lake, Missaukee, Alger, and Tuscola counties. For the most part, these data reflect the small-business, tourism orientation of northern Michigan.

Generally, selected service industries are least important in rural counties in southern Michigan. The Thumb area (Tuscola, Lapeer, Huron, and Sanilac) is especially lacking in services.

Adjusted for population, selected service establishments are least plentiful in Monroe, Clinton, Genesee, Barry, Marquette, Wayne, Mecosta, Newaygo, Isabella, and Saginaw counties. Receipts per selected service establishment are greatest in Oakland, Wayne, Jackson, Macomb, Washtenaw, Kent, Kalamazoo, Saginaw, Ingham, and Genesee counties, that is, in the population centers.

CONCLUDING REMARKS

Both in Michigan and in the United States in general, selected service industries' importance slipped slightly between 1972 and 1977, reflecting the declining personal services industries. The erosion in personal services was somewhat greater here. Also, Michigan lost jobs in amusement and recreation services in the face of a small national increment. We gained at less than the national rate in legal services, repair (nonautomotive) services, and especially in architectural and engineering services. To provide jobs for our college graduates as well as other skilled workers, we will need to look to areas such as these and to new ones, such as waste management and detoxification, during the decade of the 1980s, particularly after mid-decade when the reindustrialization of Michigan's automotive industry will have largely been accomplished.

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